Medicine and Pharmacy in Byzantine Hospitals

A Study of the Extant Formularies

David Bennett

Medicine in the Medieval Mediterranean

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Scholars have made conflicting claims for Byzantine hospitals as medical institutions and as the forebears of the modern hospital. In this study is the first systematic examination of the evidence of the xenôn texts, or Xenonika, on which all such claims must in part rest. These texts, compiled broadly between the ninth and thirteenth centuries, are also transcribed or edited, with the exception of the combined texts of Romanos and Theophilos that, the study proposes, were originally a single manual and teaching work for doctors, probably based on xenôn practice. A schema of their combined chapter headings sets out the unified structure of this text. A short handlist briefly describes the principal manuscripts referred to throughout the study. The introduction briefly examines our evidence for the xenônes from the early centuries of the East Roman Empire to the fall of Constantinople in 1453. Chapter 3 examines the texts in xenon medical practice and compares them to some other medical manuals and remedy texts of the Late period and to their structures. The xenôn-ascribed texts are discussed one by one in chapters 4–8; the concluding chapter 9 draws together the common, as well as the divergent, aspects of each text and looks to the comparative evidence for hospital medical practice of the time in the West.

David Bennett was, for most of his career, a hospital executive in the British National Health Service. In retirement, he brought together his life-long love of the Greek language and the interest he had developed in hospital history by studying the texts associated with Byzantine hospitals, first for a Master's degree and then a Ph.D. at the University of London. He died in 2012. This book grew out of his doctoral thesis.

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Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2017
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data
A catalog record for this book has been requested

ISBN: 978-1-4094-4165-6 (hbk)
ISBN: 978-1-3155-5114-2 (ebk)

Typeset in Times New Roman
by Apex CoVantage, LLC

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David Bennett
21 March 1940–12 October 2012

Foreword

The author of this work would undoubtedly have loved to see his study published in the form of a printed book. After a life in the British public health service as a hospital manager, David Bennett returned in 1994 to his high-school love of Greece and Greek culture, and he embarked with youthful dedication and senior maturity on an exploration of Byzantine hospital texts, merging life experience with an interest in history that had remained intact through the years. But fate did not allow him to see the fruits of this professional endeavour after almost twenty years of study, as the thread of his life was cut short in 2012, not long after he delivered the draft of the present book.

As early as 1996, David Bennett obtained a master's degree in Byzantine History with an essay on Byzantine remedy texts prepared under the direction of Professor Charlotte Roueché at King's College London. In subsequent years, David Bennett continued along the line of investigation he had opened in his master's thesis and deepened his approach to those Byzantine texts that apparently had come from – or were linked with – hospitals. Due to the limitations of available documentation, he focused on manuscripts produced between the recovery of Constantinople from the Latin Kingdom in 1261 and the fall of the capital in 1453, trying to go back in time to the source of the texts contained in these late codices.

Inspired by Timothy Miller – author of the first modern monograph on the Byzantine hospital, *The Birth of the Hospital in the Byzantine Empire*, published in 1985 with a revised edition in 1997 – David Bennett went further. He wished, not only to collect extant texts, but to understand how the practice they reflected actually worked. More so than Timothy Miller, he scrutinised available texts to provide a historical reconstruction of Byzantine hospital history based on accurate data, patiently collected from manuscripts. In so doing, he located his research at the intersection of different approaches to medical history with the attention to the social dimension of medicine more typical of British historians; the editorial and interpretative work particularly practised on the European continent, mostly by German, French and Italian philologists; and the interrogation of the practicalities of medicine and the workings of the ancient art of healing mostly investigated by North American historians of science, medicine and pharmacy.

This careful and patient research – not very different from that of the physician copyists whose texts he studied – constituted the substance of a doctoral thesis

that David Bennett prepared under the direction of Professor Peregrine Horden at Royal Holloway University of London. David Bennett was awarded the title of Doctor of Philosophy in 2003.

I invited him to consider revising his philological thesis for publication in the series *Medicine in the Medieval Mediterranean*, something that he accepted with enthusiasm, although he saw it as a challenge, since it would require taking distance from his own recent work and being his own critic. While we agreed that I would supervise his revision of his doctoral dissertation, fate transformed me *de facto* into the editor of a posthumous work.

Editing should be an act of empathy, requiring the editor to penetrate the mind of an author through the author's work, in order to serve the author and to improve the work without imposing on the author or altering the work – if at all possible. It results in some sort of duplication of the author, who, at the conclusion of the process, faces a version of himself or herself that thinks and writes in a way that is typically his or hers. Once editing is completed, another transfer of authorship attributes to the author the work of the editor, who disappears and allows the author to have the credit of the work performed by this temporary twin. The editor appears to have borrowed the author's identity.

In the case of a posthumous work, the task is more delicate than ever. The normal dialogue between the editor and the author – be it explicit or mute, but translated in the latter case into textual interventions acting as invitations to discuss and exchange ideas – is missing one of its actors. The editor's activity is transformed from a dialogue into research, particularly if the manuscript the editor is working on is an unfinished draft. With the help of my colleague Peregrine Horden of Royal Holloway University of London and Ashgate Senior Editor John Smedley, I have tried to transform David Bennett's manuscript into a book that, we all hope, he would have loved and been proud of, without modifying either the general architecture of the work or his typical writing style.

A particularly delicate question has been the edition of the texts on which the study is based. The editions included in David Bennett's doctoral dissertation were tentative and mostly aimed at bringing to light texts not much studied until then. Nevertheless, such editions, which were not intended to be definitive, were still too much in a preparatory phase to be reproduced here. Furthermore, although David Bennett browsed a number of catalogues of manuscripts, he did not make a systematic search and had not yet inventoried the manuscripts and texts linked with Byzantine hospitals in an exhaustive way. It thus seemed preferable to publish the contents of the texts, more or less detailed according to the work in question, and also diplomatic editions of limited fragments of medical compilations, in order to provide readers with substantial, but not necessarily definitive, information.

At the conclusion of my work as editor, I wish to thank the board of the series *Medicine in the Medieval Mediterranean*, particularly its chair, Professor Vivian Nutton, who accepted without hesitation the proposal to publish this essay in the series; Ashgate Senior Editor Dr John Smedley, who made all possible efforts to recover files in an obsolete format and forward them to me in a readable format; Dssa Emanuela Appetiti, who checked the bibliography and proofread the

manuscript; Dr Barbara Zipser for assistance with textual matters; and, more than anyone else, David's wife, Winifred, who has provided access to David's computer with the same discrete patience that she demonstrated during the years that David was preparing his master's and doctoral theses and the manuscript of this book. To all of them, I express my sincere gratitude. Without their collaboration this book would have never come to light.

Alain Touwaide
Senior Editor
Medicine in the Medieval Mediterranean

Writings by David Bennett

D. C. Bennett, *A Xenon Treatment List. Prolegomenon and Text*. Unpublished Master's Thesis. London: King's College, August 1996.

D. Bennett, "Three Xenon Texts", *Medicina nei secoli* 11 (1999), 507–519.

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Acknowledgements

As a latecomer to Byzantine studies, the help and advice I have received have been immeasurable, and the thanks rendered here are an inadequate expression of the debts I owe. Four people in particular have encouraged and supported me. Professor Peregrine Horden, of Royal Holloway University of London, has been an endless source of wise counsel with the ability to make me see issues afresh. The late Julian Chrysostomides gave me invaluable advice on the art of editing texts of Byzantine manuscripts. Dr Charalambos Dendrinos combined encouragement, scholarship and patient help with my transcriptions. Mr John Bennett, F.R.C.S., with whom I was privileged to work in the National Health Service, readily discussed and advised me on medical issues. Their friendship has enhanced my enjoyment of the work that I embarked on many years ago. I remain, of course, solely responsible for the opinions expressed in the chapters that follow, as for all else in this study. I gladly record my thanks for early financial support in the earlier days from the Dover Fund, administered by the Hellenic Society, and from the Wellcome Trust Libraries. The privileges of membership of libraries and access to them have also been greatly appreciated.[1]

Over the years, many others have helped me *in statu pupillari*, most recently Professor Charlotte Roueché, then Director of the Centre for Hellenic Studies at King's College London, who supervised my master's studies from 1994 to 1996 and aroused my interest in *xenônes*, and Professor Brian Sparkes, whose student I was at Southampton University some fifty years ago. He embodies, in his scholarship, kindness and encouragement, all that I owe to those who have taught me in my early years and given me so firm a grounding in that happiest of languages, Classical Greek. I should also like to acknowledge the examiners of the doctoral thesis upon which this book is based, Professor Vivian Nutton and Mr Nigel Wilson, for their expert scrutiny and kind advice.

Above all I thank my wife, Winifred, who has so consistently supported me and endured so patiently my long hours of work after retirement, and the frustrations that have accompanied the pleasures of this academic commitment.

David Bennett
January 2012

Note

1 I have used the resources of the Bodleian Library, the British Library, the Humanities Library at King's College London, the libraries of the Institute of Classical Studies and the Institute of Historical Research at the Senate House, the Royal Holloway University of London Library, the Senate House Library, University of London, the University of Southampton Library and the libraries of the Warburg and the Wellcome Institutes. It is of course to their individual library staff that I am most indebted, especially those of the Institute of Classical Studies and of the Palaeography Room at the Senate House. Other libraries which provided me with reproductions and photographs of the manuscripts consulted for this study are cordially thanked for their supply. They include the Bayerische Staatsbibliothek, the Biblioteca Apostolica Vaticana, the Biblioteca Medicea Laurenziana, the Bibliothèque nationale de France, the Bodleian Library, the Exeter Cathedral Library, the Österreichische Nationalbibliothek and the Patriarchal Institute for Patristic Studies, Thessaloniki.

Introduction

The oft-quoted paper by the French physician and historian of Byzantine medicine Edouard Jeanselme (1858–1935) – "Sur un aide-mémoire de thérapeutique byzantin . . ." – was my gateway to the study of Byzantine manuscripts of *xenôn* (that is, hospital) medical texts.[1] His paper, however, is confined to a commentary on, and translation of, the text designated here and subsequently as the *Therapeutikai* in three manuscripts available to him. The value of *xenôn* texts to the study of the Byzantine *xenônes* was asserted in 1985 by the Byzantinist Timothy Miller in his monograph *The Birth of the Hospital in the Byzantine Empire*.

Other scholars have made conflicting claims for Byzantine hospitals as medical institutions. This book attempts to resolve them through a systematic examination of the evidence of the *xenôn* texts, or *xenonika biblia*, on which all such claims must in part rest. Timothy Miller, in the introduction to the second and revised edition of his monograph, said that "the wealth of information [about medical texts] uncovered by simply examining one *xenôn* treatment list . . . demonstrates how fruitful careful philological and codicological research focused on a wider selection of Byzantine medical manuscripts might be in future."[2] This essay takes up that implicit invitation.

What follows, though not a history of the *xenônes*, none the less is bound to take account of their origins and nature, for discussion of the manuscript texts is impaired without some knowledge of their historical setting. In the *xenônes*, the users of the texts, the *iatroi* (physicians) and *archiatroi* (chief-physicians) – in their training, education and everyday practice – relied on the copying, acquisition and availability of manuscripts; these, together with oral transmission, were the medium for recording and transmitting medical lore, as well as for chronicling medical practice. *Xenôn* texts must, however, be read with caution. The vocabulary, definitions and classifications of a past age and a different medicine interpreted without care may lead to presumptions that the historian is not entitled to make.[3] The historian must avoid "reducing history to a hunt for precocious signs of modernity", a caution that applies especially to the reading of the foundation act − the *typikon* − of the Pantokrator *xenôn* in Constantinople which is much quoted in the following pages. At the same time, the historian should acknowledge that ancient Greek and Byzantine medicine was neither crude nor unsophisticated.[4]

Although Hippocrates and other early medical writers are cited in the pages that follow, Galen, who had "somehow defined and completed medicine", above all provides a constant point of early reference.[5] Similarly, the *Epitome of Medicine* by the seventh-century Alexandrian physician Paul of Aegina is an invaluable source with which the medicine of the *xenôn* texts can be compared: of the four great scholar physicians of Late Antiquity – Oribasius in the fourth century A.D., and Aetius of Amida and Alexander of Tralles in the sixth – he is the nearest in time to their compilation. Theophanes Chrysobalantes, who may have been writing his medical texts in the tenth century – that is, about the time the *xenôn* texts were first compiled – provides similarly useful comparisons.

There are a number of conventions in this study, the most important of which is the short title given to each of the principal texts discussed (*Therapeutikai*, *Prostagai*, *Xenonika I* and *Xenonika II*). Other medical texts are designated by the standard Latin translation of their titles.[6] The other works by Greek and Byzantine writers are identified by the standard Latin form of their titles. When a catalogue of manuscripts describes a text as part of a *collectanea*, *iatrika* or *iatrosophion*, these terms are correspondingly used in this study. The spelling of proper names follows the *Oxford Dictionary of Byzantium*, except where a common Anglicised form has long been familiar. Most of the Greek terms cited in this study are accompanied by their transliteration into the Latin alphabet, which follows the standard practice for Romanization, except when a canonical and commonly accepted form is available. Where it is necessary to quote a manuscript, this is done either in the customary full citation (name of city, library, possible collection and shelf mark, or in the Latin usual designation as, for instance, *Vindobonensis medicus graecus* 48), or, if the context is clear, more briefly (for example, Vienna codex *graecus* 48). Where necessary, citations of texts or significations of passages from manuscripts refer to folio (recto or verso) and line, for accuracy. Translations from the Greek or Latin are the writer's own unless otherwise stated. Diseases, ailments, illnesses, complaints and maladies are almost without exception called "affections", a slightly archaic but all-embracing term for any pathological state or condition.

Editorial style is based on the usage of the series *Medicine in the Medieval Mediterranean*. Citations in the endnotes are abbreviated (author's name, year of publication, page number[s], possibly note number[s]) with the full references at the end of the volume in the bibliography.

We still need to define the later period of Byzantium. It is a loose term, usually understood to comprise the years from the Latin conquest of Constantinople by the troops of the Fourth Crusade in 1204 to the fall of the Byzantine Empire in 1453. Although the manuscripts in this study are chiefly from this period, the date of first composition of each *xenôn* text is important in the study of the *xenônes* and their clinical activity. Accordingly, this study frequently returns in time to the centuries before the Latin occupation of Constantinople within whose walls the *xenônes* are chiefly, if inadequately, documented in the chronicles of the time.

The contents of this book are divided into four parts, part 1 (chapters 1 to 3) being a prolegomenon to the study, in part 2 (chapters 4–8), of the texts. In chapters 1–3, the survival of these texts, the functions of the *xenôn* deduced from them,

xenôn physicians and users of texts are surveyed. In part 2, the *xenôn*-ascribed texts are discussed one by one. The concluding part 3 depicts, principally on the evidence of the texts, the *xenôn* as an institution in which physicians practiced medicine in a manner prefiguring practice in a modern acute hospital. It is justly described as the ancestor of the modern hospital. Part 4 completes the analysis made mainly in part 2 by providing information about the primary sources consulted in this research. It includes a summary description of the major manuscripts in which the five texts under study here can be found, together with a summary of three of them (in Greek) and a diplomatic edition of the other two.

Notes

1 Jeanselme 1930.
2 Miller 1997: xxviii.
3 In this sense, see for example, Nutton 1984: 2.
4 Brockliss and Jones 1997: 510–512.
5 Nutton 1984: 3.
6 For these translations, see the catalogues by Diels 1905, 1906 and 1908. For unpublished texts, see the titles in the *Corpus of Greek Medical Manuscripts* compiled by Alain Touwaide (on which see Touwaide 1991a, 1992, 2008a and 2009a).

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Part I

Researching the history of the Byzantine hospital

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1 From hostel to hospital

The Byzantine *xenôn*

> For the World, I count it not an Inn, but an Hospital;
> and a place not to live, but to dye in.
>
> Thomas Browne, *Religio Medici*, II, 11

The sombre assessment by the physician and surgeon Sir Thomas Browne (1605–1682) of the world that he inhabited is a melancholy simile. He spoke figuratively and of his time. We may counter Thomas Browne's reflection on his mortality by an optimistic view of the first recognisable hospitals by the Greek historian of medicine Georges C. Pournaropoulos (1909–1992). In the course of an address to the Seventeenth International Congress of the History of Medicine held in Athens and Cos in 1960, he said, "Byzantium's philanthropic, social welfare and medical assistance institutions . . . were in every respect perfect and nearly similar to present day institutions of this kind. In any case they were the first fully equipped European hospitals."[1]

More lasting, however, than the bricks and mortar of the Byzantine hospitals – *xenônes* – are their few surviving formularies (*xenônos iatrosophia*)[2] in manuscripts recording remedies and ingredients. Setting aside modern conceptions of a hospital, we have to visualise what the leading historian of the Byzantine *xenôn*, Timothy Miller, has so painstakingly reconstructed from extant records and manuscripts.[3]

The first attempt to undertake a historical assessment of Byzantine hospitals took place in 1680 when the French Byzantinist Charles du Fresne, Sieur du Cange (1610–1688) reckoned that thirty-five charitable institutions existed in Constantinople.[4] Present estimates number some 115 *xenônes*, *xenodocheia* and *nosokomeia* by the mid-ninth century in the city.[5] Throughout the time of the Byzantine Empire, not least in Egypt, *xenônes* were established, often small and local as befitted local needs.

The *xenôn* as hospital

Distinguishing between *xenôn*, *xenodocheion* and *nosokomeion* is not always simple. In broad terms, we may see *xenôn* and *nosokomeion* as generally used of

a *hospital* – that is, an institution for the treatment of the sick or injured. The word *nosokomeion*, still current in present-day Greek, patently indicates its purpose – that is, a place where the sick may be tended. As for *xenôn*, *guest chamber* was its etymological meaning, in the sense of *hostel*.[6] How then, in Byzantine society, did the meaning come to change to that of *hospital*? Did one succeed the other at some distinguishable point in time? Was there a gradual overlapping of functions? Are *hostel* and *hospital* to be equated? Is the attendance of physicians at the bedside the mark of a *hospital*, one that distinguishes it from the *hostel*? More critically, are these the right questions to ask?

The word *xenodocheion*, whose essential meaning is that of a place at which strangers may lodge, is recorded in the hostel foundations of Bishop Leontios, patriarch of Antioch (344–358). We find these hostels sometimes described as *xenônes*, but there is no evidence that they were founded for the care of the sick, although they probably took in, by chance or charity, travellers with infirmities and disease not necessarily patent. In the sixth century, the Byzantine historian Prokopios (ca. 500–565) in his monograph *Buildings*,[7] uses several terms, including *xenodocheion*, for institutions that cared for travellers and the sick (see Table 1.1). In later centuries, *xenôn* and *nosokomeion* are used, sometimes it seems, interchangeably, for an institution giving in-patient treatment.[8]

Hence the protean word *hospital* inescapably calls for definition when used to translate *xenôn*. Its meaning may depend on the period in which the texts where the word appears were written.[9]

The earliest Byzantine hospital was possibly the *Basiliad* or *ptôcheion* built ca. 370 in Caesarea by Basil of Caesarea (329 or 330–379),[10] called by Gregory of Nazianzus (ca. 329–389 or 390) "a storehouse of piety".[11] In these early centuries John Chrysostom (ca. 347–407) had oversight of hospitals, and *ptôcheia* built in his see in Constantinople. The Oxford theologian John Norman Davidson Kelly (1909–1997) remarks that it seemed "reasonable to suppose that he centralised their administration and brought them under his personal supervision".[12] John Chrysostom also established a leper hospital as well as other "general" hospitals within his see.[13] These hospitals were often linked to monastic foundations, but the extent to which they resembled the modern hospice rather than hospital remains a matter for debate.

Four centuries later the concept of the hospital had spread widely. We read of the exhortation from Alcuin of York (730/740–804) to his pupil Eanbald (d. ca. 808 or 830) to think where in the diocese of York he could establish *xenodocheia. id est hospitalia*.[14] In the twelfth century, the Byzantine princess Anna Komnena (1083–1153) records in the *Alexiad* the history of her father, the emperor Alexios I Komnenos (emp. 1081–1118), including his final illness.[15] They both lived in the Mangana Palace in Constantinople, and her record includes an ambiguous reference to "the Mangana", whether palace or hospital is not clear.

Table 1.1 Terminology for charitable institutions in Procopius, *Buildings*

References to text	*Ed. and tr. Dewing and Downey 1940*	*Tr. and comm. Roques 2011*	*Terminology*
I.ii.14	36–37	83	**ξενών**, ἀνθρώποις ἀνειμένος ἀπορουμένοις τε καὶ **νοσοῦσι** (The Sampson *xenôn*)
I.ii.17	36–37	83	δύο **ξενῶνας** . . . ἔθετο ἐν ταῖς Ἰσιδώρου τε καὶ Ἀρκαδίου καλουμέναις οἰκίαις
I.vi.6-7	62–63	89–90	τέμενος . . . **οἰκοδομίαν**, ἐπειδάν τέ τινες **ἀρρωστήμασιν** ὁμιλήσαιεν ἰατρῶν κρείττοσιν
I.ix.12	78–79	94	. . . πτωχῶν ἦν ἐκ παλαιοῦ **καταγώγιον** οἱσπερ ἡ **νόσος** τὰ ἀνήκεστα ἐλωβήσατο
I.xi.27	96–97	99	**ξενῶνας** ὑπερμεγέθεις ἐδείμαντο, τοῖς τὰ τοιαῦτα ταλαιπωρουμένοις . . .
II.x.25	172–173	171–172	προὐνόησε δὲ καὶ τῶν **ἀρρωστήμασι** πονουμένων ἐνταῦθα πτωχῶν, **οἰκία** τε σφίσι καὶ τὰ ἐς τὴν ἐπιμέλειαν καὶ τῶν **νοσημάτων ἀπαλλαγήν** . . .
V.iii.20	330–331	359	τὸ τῶν **νοσούντων ἀναπαυστήριον** . . .
V.iv.17	334–335	360	**ξενῶνας** . . . ἐδείματο καὶ ὅσα ἄλλα ἐνδείκνυται πόλιν εὐδαίμονα.
V.vi.25	348–349	364	**ξενῶνες** . . . δύο, . . . ἅτερος μὲν ξένοις ἐνδημοῦσι καταλυτήριον, ὁ δὲ δὴ ἕτερος **ἀναπαυστήριον νοσοῦσι** πτωχοῖς.
V.ix.4	356–357	367	**ξενῶνα** ἐν Ἰεριχῷ (numbered among the monasteries restored in Jerusalem)

The remaining references to charitable institutions in *Buildings* are to the restoration or renewal of four πτωχεῖα (V.ix.22, 27, 34 and 38 [ed. and tr. Dewing and Downey 1940: 358–359 and 360–361; tr. and comm. Roques 2011: 368–369]) and the οἶκον of the Sts. Cosmas and Damian in Pamphylia (V.ix.37 [ed. and tr. Dewing and Downey1940: 360–361; tr. and comm. Roques 2011: 369]).

Healing in *xenônes*

Scholars once traced the distinction between *hostel* and *hospital* in Byzantium to a gradual process of separation of functions over the centuries. The *xenôn qua hospital* did not spring fully armed, as it were, from the pious and charitable institutions that once sheltered travellers and the poor. The early *hostels*' provision of elementary charity and shelter for travellers paved the way for the dedication of these institutions

to the treatment of the sick as chief objective. The importance of this process of change from first aid and shelter to institutional medicine lies in the evolution of a public medicine for which there is no discernible historical precedent.[16]

Evidence of what kind of medical practice a *xenôn* might undertake in these earlier centuries is hard to come by. The caution expressed by Vivian Nutton about the inadvisability of relying on lives of the saints for evidence[17] applies particularly to the *Miracles of St. Artemios*, a text written in the mid-seventh century that makes a number of useful references to *xenônes* in the course of describing that saint's healing of genital diseases and hernias.[18] Miracle 22 gives some indication of hospital practice at the *Christodotes xenôn* when its *xenodochos*, or *administrator*, who was also "prominent in the patriarchal retinue", saw a sixty-two-year-old man with incipient dropsy who lived alone:[19]

> [He] had him put to bed in the . . . hospital after enjoining the chief physicians and their assistants to care for him. The patient spent a period of ten months thus and was diligently treated by the physicians to the best of their ability, but received no benefit at all.

In this time the old man had developed a secondary affection of his testicles that, though beyond the power of the physicians to remedy, was healed by the saint. There is much of interest here to the historian of the *xenôn*, making all due allowance for its narration perhaps long after the event and one that was intended at the time of writing to put the hospital physicians in a poor light. The patient was brought into the hospital by its administrator as, it seems, a Christian act of charity; he stayed there for ten months being treated "diligently"; the account says nothing of the course of his dropsy but turns instead to a testicular infirmity that worsened while he was in the hospital.[20] That the narrative is suited to the writer's purposes need not detract from the account of elements that are familiar in the modern perception of hospital practice – admission, in-patient stay, treatment, physician and assistant, ward rounds and hospital administrator.

The *xenôn* as ancestor of the modern hospital?

If we are to define the *xenôn* as in some sense the precursor of the modern general hospital, we must rely on the presence of *professional* medical care available within it. The role of physicians in the *xenônes* appears in some respects to be little different from that current today. A modern assumption is that a hospital depends on its medical staff, be it simply a visiting medical officer in a cottage hospital or many practitioners of varied experience, rank and speciality. Their Byzantine rank is marked by their title − *aktouarios*, *archiatros, iatros* – much as today's practice marks levels of experience from house officer to senior house officer, through the two grades of registrar to consultant. Byzantine hospital physicians' duties, sessions and remuneration are recorded in the *typikon* of the twelve-century Pantokrator *xenôn*.[21] This extensive document sets out the requirements for the governance of the *Monastery of Christ*, *Ruler of All* (*Pantokrator*) that was built in the early

twelfth century, its foundation including three churches that still stand, a hospital and a home for the elderly.[22] The duties of the *xenôn*'s physicians are set out clearly together with details of paramedical and ancillary staff. It is a remarkable document, but doubts remain about its practical realisation in premises and staff.

The remedies for the dropsy in the case described above failed, and the attending physician declared the supervening testicular problem hopeless. Again, this text is partial, favouring the works of the saint in comparison with the inadequacies of the physician. But if it is impartiality that we seek in estimating the care and efficacy of a hospital, then or now, its working practices are as important to an assessment as anecdote. For example, do its practices have the objective of healing and palliating the consequences of disease and sickness? Today's hospital presents a mosaic of interlocking activities, more complex than most patients see. How far a similar presumption can be made for the *xenônes* is difficult to say; there is evidence that some had administrators, itself suggestive of a certain complexity and change in society.

The writer and epistolographer Ioannes Tzetzes (ca. 1110–1180) addressed two letters to physicians, one to the *Archiatros* Michael[23] and the other to a physician Michael,[24] together with one to an unnamed administrator of the Pantokrator *xenôn*.[25] Their subject matter is mundane, but the addressees suggest a wider and more mixed social milieu than in earlier centuries. In the broadest terms we tend to see the twelfth century in Byzantium as one of development as well as change, in both town and countryside.[26] In the field of medicine, the once-disdained physician was gaining credence, although satirised from time to time.[27]

From the late centuries of Byzantium stem the manuscripts of the extant *xenôn* remedy texts discussed in this book, the best clinical evidence about the medicine practised in these hospitals. Although reliance has been placed on written sources for the *xenôn* in the form of chronicles, *Lives* of saints, charters and laws, they amount to no great number.[28] They rarely touch on the clinical aspects of the *xenôn*. The remedy texts, instead, give some indication of treatment patterns.

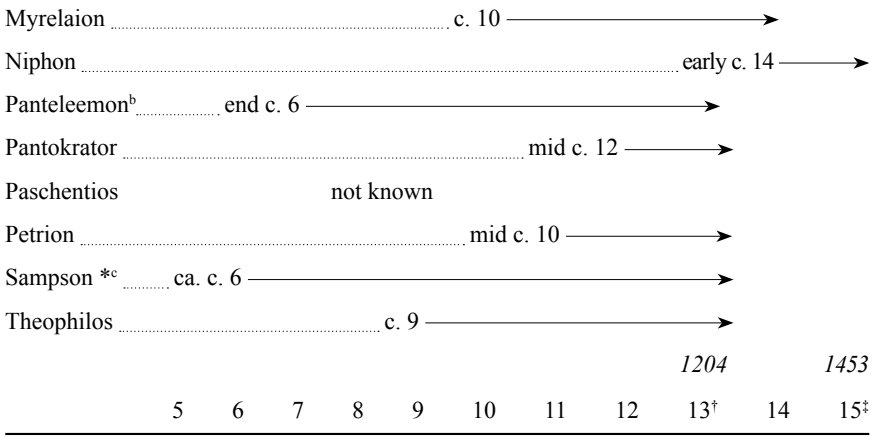
A more disinterested source of information is, however, available. The extant acts of foundation of two *xenônes* (the *typika* of Pantokrator already mentioned and that of the Lips *xenôn*) give the most direct picture of the function and nature of institutions.[29] Whether the lost *typika* of other *xenônes* were similar in kind will probably not be known. All these sources, however, contribute to the study of the social, cultural and medical aspects of the *xenôn qua hospital*, principally its evolution, embodiment of *philanthropia* and clinical practice.[30] The picture that emerges from a study of this kind, however, is a mosaic from different phases of Byzantine history that cannot adequately reflect a single period.

That is to say, the *xenôn* of the seventh century may have had one or more functions (for example, the care of the elderly) amongst which the *hospital function* may have been secondary, or it may have been a dedicated institution.[31] This uncertainty in particular was first apparent when in 1680 Charles du Cange first set down the names, functions and locations of thirty-five charitable institutions in and around Constantinople. From his work later, historians were able to build both factual and conjectural assessments of their functions from the elusive and

often ambiguous evidence. Of these historians, Timothy Miller describes only sixteen *xenônes* in Constantinople from the founding of the *Sampson xenôn* in the sixth century to the Latin occupation of Constantinople in 1204.[32] The French Byzantinist Raymond Janin (1882–1972) lists several more, some as *xenônes* or *xenodocheia*, some as *nosokomeia*. Under *nosokomeia* he places nine of the institutions listed by Miller as *xenônes*. Under *xenôn*, however, he records twenty-eight *xenônes* that he describes as first and foremost *common lodging houses*; of this number, some were, in Janin's words, "aussi souvent de véritables hôpitaux".[33] The difficulties of interpretation and nomenclature are thus reinforced. There is doubt, too, about where in the city the *xenônes* were located and consequently whether there is confusion of identities. Some *xenônes* were founded or re-established when the seat of the Byzantine Empire returned to Constantinople in 1261, but the funds to maintain them were undoubtedly diminished, and endowments lost. This is probably why so many renowned *xenônes* are not referred to again in the sources; they did not survive the Latin occupation.[34] Table 1.2 lists, from Timothy Miller and Raymond Janin, institutions that almost certainly cared for the sick in the manner of a hospital.

Table 1.2 Xenônes in Constantinople

xenôn	*century*										
									1204		*1453*
	5	6	7	8	9	10	11	12	13†	14	15‡
Arkadios	ca. c. 6 →										
Basilikos[a]	ca. c. 12										
Christodotes	ca. c. 6 →										
Euboulos	ca. c. 5–6 →										
Evergetes	c. 11 →										
Forty Martyrs	c. 12 →										
Glabas	c. 13 →										
Irene *	ca. 800 →										
Isidore	early c. 6 →										
Kosmidian	ca. c. 5–6 →										
Krales	early c. 14 →										
Lips	early c. 10 →										
Mangana	ca. 1050 →										
Markianos *	ca. c. 5 →										



Chronology above is based on source or estimated:
† Latin occupation of Constantinople, 1204–1261.
‡ Fall of Constantinople, 1453.
* Reference in *De ceremoniis* 1. 32 (ca. 957–959 [?]).
[a] It is not certain that this was a *xenôn*; it may have been an epithet for an unknown imperial foundation.
[b] Also called the *Narses*, but see Janin 1969: 560–561.
[c] Destroyed by fire in the Nike revolt of 532 and rebuilt afterwards.

A deceptive ideal?

The *typikon* of the Pantokrator hospital and the very brief Lips *xenôn typikon* disclose, in their ordinances of the *xenôn*, an advanced aspect of Byzantine society. There has been, however, a tendency among historians to apply their provisions retrospectively without the certainty that they had ever been translated from paper to practice. Timothy Miller has been taken to task, *inter alia*, for using the Pantokrator *typikon* "to confirm the pre-existence of all its features six centuries earlier"[35], a theme reflected by Ewald Kislinger in his paper "Der Pantokrator-*Xenôn*−Ein Trügerisches Ideal?". In this, he emphasised "the comparatively ephemeral existence" of the Pantokrator *xenôn*.[36] Nevertheless, the *typikon* shows strong evidence both of being based on practical experience over a long period of time and of the operational requirements of a *xenôn*.

Views of this kind perhaps originated partly in a defensive emphasis on the comparative superiority of Byzantine civilisation and achievements.[37] But the *xenôn* came to be more critically assessed and established in its medical, social and cultural context.[38] Demetrios J. Constantelos provided a wealth of early sources for the history of *xenônes* and other charitable institutions of Byzantium.[39] He examined them in the setting of *philanthropia*, the impulse that governed the charitable actions of benefactors, although he acknowledged the more worldly or self-serving considerations of some benefactors and founders. If *philanthropia* is an abstract quality expressed in practical action, law codifies that action. For example, Georg

Harig (1935–1989) in Germany observes how the Byzantine *xenônes* became a part of the social and economic life of Byzantium.[40] This resulted in the statutory regulation of medicines and dispensers, the appointments of administrative physicians, and financial management.[41]

Not until Evelyne Patlagean (1932–2008), however, were the *xenôn* and its pious and charitable intentions placed, *inter alia*, in a social and cultural context − in this case, the fourth to seventh centuries.[42] She traced the impulse to charity and the establishment of charitable foundations, not simply from the self-help activities of the Christian diaconates, but from a more general concern for the poor stemming from pre-Christian times. The *ptôcheion* (*poorhouse*) was a refuge for the poor, but the link between poverty and disease imposed a need for, at the least, elementary medical care. This help for the sick poor was to be provided, irrespective of whether the sick person could pay. It was from there, she argues, a short step to the provision of a refuge dedicated to medical care and to the evolution of the hospital with its attendant physicians (*xenodochos*, head or manager of a *xenodocheion*).[43] Patlagean's monograph covered a broad sweep of social history over the centuries at the end of the Early Period of Byzantium.

The first comprehensive study dedicated to the *xenôn* from its earliest days up to 1453 was Timothy Miller's influential monograph, *The Birth of the Hospital in the Byzantine Empire* (1985), which studied the Byzantine hospital in all aspects of its evolution, social setting, history, function and activity.[44] Many of his conclusions were challenged, and Miller responded to his critics in 1997 in the introduction to a second, revised edition. In this he asserts, *inter alia*:[45]

> By the eleventh and twelfth centuries they [the *xenônes*] had become the principal *theatres* of the Byzantine medical profession, providing both specialised treatment to hospital patients and walk-in clinical services to the general population.

This assessment is evaluated in the present book, although factual evidence to support it often remains elusive.[46]

Notes

1 Pournaropoulos 1960: 378–380.
2 For clarity in this study, these texts, when prepared for hospital use, will be called *xenôn remedy texts*.
3 Miller 1985 with a revised edition in 1997.
4 Du Cange 1680: *Constantinopolis Christiana*, Part 2, 163–166.
5 For these numbers, see Horden 2005.
6 The *Dictionarium Latino-graecum* published in 1554 by the French physician and printer Charles Estienne (1504–1564) gives (371, col. 2, ll. 28–20) "Hospitium . . . ξενών" (on Ch. Estienne and the *Dictionarium*, see Renouard 1843: 352–363, and 107, no. 13, respectively). Stephanus (i.e. Henri Estienne, nephew of Charles), in his *Thesaurus* published in 1572, defines the *xenôn* primarily as "Locus hospitibus peregrè advenientibus destinatus, Locus ad quem divertunt hospites" and secondarily as a synonym of

ξενοδόχειον (*xenodocheion*) (see 2.1127). Johannes Scapula (ca. 1540–ca. 1600) gives a more complex definition in the first edition of his *Lexicon Graecolatinum* (1580, 1123, col. 1, ll. 9–11): "Locus hospitibus peregrè advenientibus destinatus. Exponitur &, nosocomium, seu domus in quam peregrini aegrotantes recipiuntur. Suid." From the second edition on, however, he modified this definition by returning to Ch. Estienne's one (1589 edition [= 2nd], col. 1119, l. 1): "Ξενών, hospitium" (see also the 1593 edition [= 3rd], col. 1119, l. 1, or the 1604 one [= 5th edition], col. 1123, l. 47 for the same short definition). The French Jean Crespin (ca. 1520–1572) is more precise. In his 1554 edition (f. [Ccv] verso, col. 2, ll. 27–29), he gave the following definition: "Ξενών . . . hospitium . . . Item nosocomium, in quo valetudinarii curantur. . . ." However, in his 1583 edition (1.774, col. 2, ll. 18–20, particularly 19), he stressed the etymological meaning of the term in the same way of Scapula's first edition (1580): "Ξενών . . . nosocomium, seu domus in qua peregrini aegrotantes recipiuntur. Suid."

7 *Procopius*, *De aedificiis*, ed. and tr. (English) Dewing and Downey 1940, and, more recently, ed. and tr. (French) Roque 2011. On this work, see Cameron 1985: 84–112.

8 For evidence of this, see Halkin 1957:1614 z, *e codice Athon. Philothei*, 8, and Halkin 1977–79. Also Miller 1990: 101–135.

9 In this assessment, the word "medicalised" will be used, not as a word of choice but to avoid clumsy periphrasis. For a survey of research on Byzantine hospital in the early 1960s, see Philipsborn 1961.

10 On the Basiliad, see mainly Miller 1985: 55; Birchler-Argyros 1998: 8–9; Crislip 2005: 103–116. On the antecedents of the Basiliad as the first form of hospital, see Crislip 2005: 120–133 and 138–142 (for the conclusions of this monograph). For a summary of the question, see Horden 2004: 85. On medical care in Late Antiquity, see van Minnen 1995.

11 *Gregorius Nazianzenus*, *Orationes* 43.63, 1–7 (ed. and Fr. tr. Bernardi 1992: 260).

12 Kelly 1995: 141.

13 *Ibid.*: 119–120. See also Miller 1985: 56, Birchler-Argyros 1998: 9, and Crislip 2005: 103.

14 *Alcuinus*, *Epistolae*, 56 (ed. Dümmler 1895: 169, no. 14). On the hospital in the early Middle Ages, see Sudhoff 1929 for example.

15 *Anna Comnena*, *Alexias*, XV.11 (ed. Reifferscheid 1884: 2.305–317 = ed. Reinsch and Kambylis 2001: 1.493–505).

16 See Crislip 2005: 133–142.

17 Nutton 1977: 211.

18 *Miracula S. Artemii* (ed. and Engl. tr. Crisafulli and Nesbitt 1997).

19 *Ibid.*: 130–137 for the whole tale and 130, ll. 14–15 for the quotation here (English translation at 131).

20 *Ibid.*: 134, ll. 27–28 (with the translation at 135).

21 *Pantokrator typikon* (ed. and Fr. tr. Gautier 1974; Greek text with a commentary and facing French translation; for an English translation with commentary, see Jordan 2000). For a detailed, line-by-line study, see Birchler-Argyros 1998: 37–69. The bibliography on the Pantokrator is abundant from Orlandos 1941 and Codellas 1942, for example, to Kotzabassi 2013.

22 *Pantokrator typikon*, ll. 937–954 (ed. and Fr. tr. Gautier 1974: 84–87; Engl. tr. in Jordan 2000: 757–758).

23 *Tzetzes, Epistulae,* 48 (ed. Leone 1972: 68–69).

24 *Tzetzes, Epistulae,* 74 (ed. Leone 1972: 108–109).

25 *Tzetzes, Epistulae,* 81 (ed. Leone 1972: 121).

26 See Kazhdan and Epstein 1985: 155–158.

27 See the *Timarion* (ed. Romano 1974; Engl. tr. Baldwin 1984), whose eponymous hero travels to Hades for three days in a tale that ridicules the physicians and the medicine of the time.

28 Examples of the chroniclers are *Scylitzes*, chapter 29, on the foundation of the *xenôn* in the Mangana group of buildings (ed. Thurn 1973: 476–477), or *Niketas Choniates* on the establishment of the *nosokomeion* of the Forty Martyrs (*Nicetas Choniata*, *Historia*, *Isaacus Angelus*, 3 [ed. Bekker 1835: 585, ll. 10–13 = van Dieten 1975: 1.445, ll. 6–7]). For the lives of saints, see, for instance, the article by Magoulias 1964.
29 The two extant *typika* are edited respectively in Gautier 1974: 26–131 (with a study at 8–26) and Delehaye 1921: 106–140 (with a commentary at 172–185). For a study of the Pantokrator, see Gautier 1974: 37–69, Volk 1983 and, more recently, Jordan 2000. For Lips, see Birchler-Argyros 1998: 95–102.
30 These three aspects are inseparable. See Tröhler and Prüll 1997:160. On the topic of *philanthropia*, see Constantelos, 1968, Patlagean 1977, and Constantelos 1992.
31 Horden 2006: 45–74.
32 See Miller 1985: 287.
33 Janin 1969: 567.
34 Thomas 1987: 244–269.
35 Nutton 1986: 218.
36 Kislinger 1987. See also Horden 2007b: 65–71.
37 Kislinger 1987: 173.
38 Tröhler and Prüll 1997.
39 Constantelos 1968: 1.
40 Harig 1971: 179.
41 Eftychiadis 1983a: 71–76 and 77–90, lists these and other regulations.
42 Patlagean 1977.
43 In Asia Minor and Egypt, for example. For foundations in these parts, see Patlagean 1977: 194–195.
44 The monograph was preceded by a 1984 paper on Byzantine hospitals, which Miller contributed to a Dumbarton Oaks Symposium on Byzantine medicine (see Scarborough 1984).
45 Miller 1997: xi.
46 *Ibid.*, chapter 8, "The Hospital in Action", and chapter 9, "Hospitals and Medical Literature", 167–189.

2 Uncertainties

> Greek medical manuscripts are replete with shorter or longer texts,
> badly composed, badly marked as to beginning or end,
> and often transmitted anonymously or under pseudonyms.
> Owsei Temkin, "Byzantine Medicine: Tradition and Empiricism", 1962: 113

Fundamental to the best practice and utilisation of beds in *xenônes* and hospitals alike, in contrast to long-stay institutions, are the controlled admission and discharge of patients. It is so obvious that it is taken for granted, but the lack of evidence about the admission of patients to *xenônes* and their discharge prevents any assessment of how well they were used.[1] Were hospitals of this time usually fully occupied or only sporadically occupied? What affections or trauma warranted admission to a *xenôn*? Were the sick whose condition warranted admission allowed to enter on presentation at the doors of the *xenôn*, or after medical examination or even by some form of subscription?[2] If no beds were available, were they turned away? If a bed was necessary and available, was any charge ever made? It is claimed that it was a free service. This is implicit in the concept of *philanthropia*, in the examples of the *anargyroi*,[3] and in the pious and charitable intentions of the foundations. Intentions might have taken the form of endowments (imperial, private or religious) that, by analogy with monastic endowments, met the running costs of *xenônes* and, perhaps, the costs of treatment.[4] A free service was possible so long as endowments remained adequate; their sufficiency might, however, be mutable in times of economic hardship.[5] The Belgian Bollandist and Byzantinist Hippolyte Delehaye (1859–1941) observes in the case of the Lips *xenôn*, for example, that[6]

> . . . ces biens [for the endowment of the *xenôn*] sont inaliénables . . . si le malheur des temps ou quelque invasion des barbares l'exigeait, on pourrait se procurer des ressources en vendant des objets précieux, sans toucher aux propriétés.

This witness to the recognition of the possibility of hard times in a particular instance supports an assumption, otherwise only tenable through the silence of

the sources and inferences drawn from the concept and practice of *philanthropia*, that generally costs of bed, board, medicines and medical attention drew on the endowments of the *xenôn*.[7]

There are other aspects of social function that are presently incapable of resolution. How ill did a patient have to be to be admitted? A description of a patient admitted to the Christodotes *xenôn* is clear – "he chanced . . . to succumb to severe diseases".[8] Did the number of beds available match demand?[9] How was the balance between admission and discharge maintained if beds came to be occupied by moribund or contagious patients, or those whose malady became chronic, or for whom nothing further could be done?[10] Were there ward rounds, of the kind adumbrated five centuries earlier in the miracles of St Artemios?[11] Was there the equivalent of an out-patient clinic that met the needs of the ambulant sick and perhaps performed some form of triage?[12]

There are numerous other questions that might be put once a claim for ancestry of the *xenôn* to the modern hospital has been made. At their head is the lack of correspondence between Western modern and Byzantine medicine. This is not to compare the systems; they are not comparable, although they had the same goal of seeking healing. Medicine is an art, and, for all the scientific advances of Western medicine, outcomes may still remain uncertain – how much more so in ancient medicine where "ill health (was seen) as essentially a kind of imbalance in the body. This imbalance was located primarily in the humors; so the task of therapy was to restore them to their proper equipoise".[13]

Morbidity

Historians are hampered by a lack of reliable knowledge of Byzantine morbidity patterns. There have been several attempts to identify what may have been some of the principal affections to which Byzantine society was liable, irrespective of rank or wealth. There is no certainty, however, on examination of the *xenôn* remedy texts, or indeed of more considerable remedy writings of the Byzantine age, what the descriptions of symptoms and signs in these texts signified or what were the principal diseases of that society.[14] The Greek historian of Byzantine medicine Aristotelis Eftychiadis, amongst others, proposes respiratory disease, anaemia, fevers, plague, parasitic diseases and orthopaedic and rheumatic disorders; he also places emphasis on nephropathies.[15]

Are there indications of any of these diseases, if Eftychiadis' list is a representative guide, in the *xenôn* remedy texts? Clearly fevers, whatever their aetiology, are represented in all the remedy texts. This study conjectures that one of the texts may record remedies for diseases that are accompanied by fevers. As for the other diseases in Eftychiadis' list, the remedy headings in the texts under study here are frequently not amenable to retrospective diagnosis with absolute certainty; κοιλιακά (*koiliaka*), or bowel disorders, standing alone at the head of a remedy provides one example.[16] Of the four recipes given under this head, the first is designed, apparently prophylactically, to avoid δρακοντίασις (*drakontiasis*, a parasitic affection), but no indications are given for the other three. Elsewhere

the remedy headings are so extensive that they defy the prospect of a realistic application.[17]

It would be desirable to analyse the headings of remedies to determine what affections were most commonly encountered in a *xenôn* on the premise that workaday texts are unlikely to include the rarer ones for which therapeutic guidance was available in the encyclopaedic works of the earlier medical writers. The historian of ancient and medieval pharmacy Jerry Stannard (1926–1988) proposes, in his paper on Hippocratic pharmacology, that the most prevalent groups of diseases were probably gastro-intestinal, followed closely by upper respiratory tract infections, to which he adds localised lesions and infections, dermatological conditions and gynaecological disorders: malaria, too, was endemic.[18] Significantly enough, these data compare with a similar analysis made by Alain Touwaide on Dioscorides' *De materia medica* – that is, in the first century A.D.[19] These lists can be extrapolated to the Late period of Byzantium with reasonable confidence, but just as it is difficult to identify the diseases from the descriptions in the text, so it is only with difficulty that conclusions about nosology or pharmacotherapeutics can be drawn from the remedy texts.

House or hospital medicine?

As each text is discussed,[20] it will be apparent that there is both a general presumption that the user of the text, physician or not, will instinctively know what use to make of a remedy and in what circumstances.

If this hypothesis of instinctive knowledge is correct, it suggests both that the texts are little more than equivalent to the modern pharmacopeia and that they are no more than personal records of useful remedies that have survived and been copied. Both of these conjectures are strengthened by the lack of theory or discussion in the remedy texts, which has been taken to mean that they reflect a low-level medicine being practised in the *xenônes*. We may see this assertion at two levels, the first of which is concerned with the means of treatment alone. These means are primarily the ingredients of remedies and secondly invasive strategies such as phlebotomy or cautery. Herbal and non-herbal ingredients have been used throughout antiquity and in later periods up to the present. Where they can be strictly equated to the modern equivalent, some are recognised still as being of proven efficacy when properly administered. Many, we may judge, were harmless and inert, and a few were rightly used with caution. As simples, their properties would be apparent in the treatment of some patients, less so or not at all in others. Of compounds, it is more difficult to speak, particularly as they grew more complex; some of the remedies have thirty or more ingredients. It is misleading, however, to equate means of treatment with the *level* of treatment.

The means of treatment in a hospital context may be judged in terms of the complexity of the affection being treated. The remedy texts are uncertain guides to the affections presenting in patients admitted to a *xenôn*, but an overall impression is evident on inspection of each remedy text index. The majority of the remedies is on a par with household medicine or, at best, first-aid provision. In contrast, the

xenôn remedies identified as *coming from Persia* are on a marginally higher plane in terms of complexity and directions and indications for use. The few remedies from the *Mangana xenôn* are commonplace; the *xenôn* text of the codex *Vaticanus graecus* 292 has an intrinsic interest if it is potentially a fever manual.

Judgements of this kind are inevitably subjective, and the emphasis should therefore turn to what expectations there might be of a *xenôn* planned on the ordinances of the Pantokrator *xenôn typikon*. The sources give some indication. We have already read of the patient who spent ten months (*pace* the sole manuscript) in the Christodotes *xenôn*, initially admitted at risk of dropsy. In the same manuscript, Miracle 21 relates the tale of the patient who was admitted to the Sampson *xenôn* for surgery to reduce his rupture.[21] Other examples will be found in subsequent chapters. The two quoted here appear to be appropriate to in-patient treatment; others that we shall come to may in modern judgement seem more appropriate to, say, out-patient treatment if we could be certain of what the symptoms described indicated in reality (a nosebleed may be more significant than it appears).[22] The same may be said of the greater part of the remedy texts.

From another perspective, all the symptoms described in the texts may reasonably call for medical attention from physician or assistant, especially if folk medicine or *vis medicatrix naturae* has failed. In this aspect, are the origins of the *xenôn* in its provision of shelter and care for travellers and the poor? The transition to *xenôn* now assumes a logic because provision for the sick poor in facilities that are in whole or in part dedicated to that purpose remains as much a charitable act as that of the original foundations in the fourth century.

The types of texts

Discourse on the *xenôn* manuscripts and medical texts, their making and their copying, without allusion to their utility, is not unlike the biblical task of making bricks without straw. Their subject matter, whether it is the choice of sites for bleeding or the advantage of taking a remedy after a hot bath, is not simply informative but possible evidence for a study of the medicine being practised in *xenônes* in the Late Byzantine period. The efficacy of the treatments and the elucidation of the theory that underpins them is beyond the scope of this study even if it were feasible, but the record of their application and comparison with earlier records aids the understanding of *xenôn* practice.

Mediaeval iconography often depicts the determined surgeon confronting an apprehensive patient: the physician, more reassuringly, sits with his jordan.[23] Literary sources recount tales of sickness and disease in Late-period Byzantium, both personal and among the population. The poet Theodore Prodromus (ca. 1100–1165/1170) complained in a letter of the physician's failure to cure his smallpox.[24] A Catalan eye-witness in the opening years of the fourteenth century told of the arrival of so many refugees who made their dwellings on Constantinople's rubbish tips that starvation and disease were ever present.[25] The eleven episodes of the Black Death in the city between 1348 and 1466 are reconstructed from the letters of eyewitnesses and other sources.[26] Vivid though these illustrations and accounts

are, more may be deduced from Byzantine medical manuscripts. For example, in the application of humoral medicine to the diagnosis of disease and prescription of treatment in everyday clinical practice, the historian of medicine Owsei Temkin (1902–2002) says:[27]

> . . . in contrast to the works of the ancients and the commentaries on them, and to the more literary products of Byzantine medical authors, [the language of everyday practice] has left many traces. Greek medical manuscripts are replete with shorter or longer texts, badly composed, badly marked as to beginning or end, and often transmitted anonymously or under pseudonyms. These writings range from phlebotomy, diagnosis from blood, urine, faeces, medical astrology, brief dietetic rules, to recipes . . .

Xenôn remedy texts did not replace the earlier works that remained as channels of instruction in, and transmission of, medical knowledge, but brevity, as the Byzantine physician Romanos recognised, is to be valued in the daily round.[28] No longer was "the ambition of the Byzantine encyclopaedists [pursued] of collecting in a single book all the knowledge necessary to a physician".[29] It was replaced by the recognition that the everyday needs of clinical practice could be met by short texts on applied medicine, although this was not an innovation. The four folios of medical remedies, possibly copied in the eighth century, of codex *Parisinus Coislinianus* 120 suggest that it was a practice not confined to the Late period.[30] The survival of an abundance of texts of this kind affirms their merit in personal or institutional use, or as lecture notes for the teacher or pupil. Their origins amongst practising physicians give the nearest insight into the application of medicine and regimen in everyday practice that the modern reader can obtain.

The remedy texts are defined by the economy of their contents and their distillation of the innumerable remedies, traditional, innovatory, and from other cultures. Lacking indices for ease of reference, or the order of contents that the modern user requires, they served individual physicians and, so the *xenôn* attributions suggest, institutions. Their manuscript form allowed amendment, addition and deletion in each subsequent copy. Some, like the three-hundred-page compilation in Vatican codex *graecus* 299,[31] however, were encyclopaedic, omitting, it seems, nothing that might be useful. In contrast, the *xenôn* texts give every appearance of careful selection; the hand that wrote the title at the head of *Xenonika I* added διὰ πείρας (*dia peiras*, by trial).

Texts and practice

In Antiquity, physicians sought to be successful. The criterion of success was no less important to the Byzantine physician, but in the *xenôn* he was a salaried member of staff.[32] A modest competence was perhaps sufficient.

In the five ὀρδίνοι (*ordinoi*, here wards) of the Pantokrator *xenôn*, there were fifty beds, a relatively small number. There is an allusion to an out-patients' department, it may be conjectured, in the form of an ἰατρεῖον (*iatreion* or doctor's

surgery) and associated dispensary.[33] Like the modern hospital, so the *xenôn* is too easily envisaged in terms of bed numbers that in practice are occupied by a very small proportion of a given population at any one time. Affections requiring admission to the wards are rare, relative to the number that are seen in an out-patient clinic. If this generalisation is equally applicable to the Byzantine *xenônes*, then the *xenôn* remedy texts were potentially used for all the therapeutic activity of a *xenôn*. The several references to the recumbent patient (ὁ ἄρρωστος ἀνακλιθείς, *ho arrôstos anaklitheis*) in the *Prostagai* text appear to limit this text to remedies for the patient on the ward, but the other texts make no such distinction and contain a preponderance of remedies for minor affections.

Although the tenth-century physician Theophanes Chrysobalantes (Theophanes Nonnos)[34] and later writers did, in the case of certain affections, note that, if medicine failed, elective surgery might be unavoidable, the *xenôn* texts, and indeed remedy texts generally, prescribe no surgery except the adjuvant procedures of phlebotomy or cautery.[35]

Changes in remedies

Remedy texts are open to modifications as we have noticed. It may be that Timothy Miller had this in mind when he observed, relying on the nineteenth-century French historian of medicine Charles Daremberg (1817–1872), that very few recipes in the remedy text of the Byzantine physician of unknown epoch Ioannes Archiatros "depend on the works of Galen and his epitomizers".[36] From this observation he adduced "significant changes in the actual practice of medicine" at the time of Ioannes.[37] The *floruit* of Ioannes is debatable, as is Miller's contention that he was a *xenôn* physician, but his observation about dependency could equally be made of the *xenôn* remedy texts on first reading.[38] There was nothing to prevent new ingredients, or new uses of familiar ingredients, being tried within the framework of medicine laid down by the uniform interpretation of Galenism from the sixth century and after.

There is no better illustration of this than the compiler's observations – dated by the Vatican cataloguers, Cardinal and *scriptor* Giovanni Mercati (1866–1957) and his colleague Pio Franchi de' Cavalieri (1869–1960) – to the late fourteenth or early fifteenth century, on a small remedy text in codex *Vaticanus graecus* 282:[39]

> A pill for bleeding gums; I collected it from Latin and Greek books, made it up and went on to try it; the physicians on Lesbos, Chios and Euripos have, in my opinion, found it excellent. It is the best possible remedy for the teeth. They use it and praise it highly . . .

In this note are the marks of new influences on Byzantine medicine, not from books alone but from practitioners from other places who came to practise in Byzantium. A remedy among the Mangana *xenôn* passages is attributed to Abram *Sarakênos*. It is difficult to be sure whether *Abram Sarakênos* was Jew or Arab, but "in Byzantium, as in the mediaeval Islamic world, there were many Jewish

physicians", some in high office.[40] Yet it is medicine in Arabic that appears to have had the greater influence on Byzantine tradition.

The inter-relationship between the Greek and Arabic medicine was seen not only in the translation movements from the ninth century and after but in the movement of physicians between Byzantium and the Arab lands. Ibn Masawaih (b. 776), most known in the West as Mesue, who was sent to Byzantium to bring medical texts back to Baghdad, and Ibn al-Mutran (d. 1191), once a Christian who had travelled to Byzantium and served Saladin (1138–1193) as a physician, provide two examples, separated by four centuries, of these exchanges.[41]

The influences resulting from the movement of physicians are portrayed in various ways in the manuscripts. Each ingredient of *Abram*'s remedy is transliterated from Arabic into the Greek alphabet, and a Greek translation is added, preceded by introductory transitions such as *that is to say*, thus rendering the text effectively bi-lingual and of use to Arabic and Greek speaker alike.[42]

The twelfth-century codex *Vaticanus graecus* 300 has two notes at f. 273r that set down the Arabic equivalents for Greek terms.[43] Another Vatican codex, *Vaticanus graecus* 298, dated to 1385–1389, contains the περσικαί (*persikai*), a glossary of almost forty Greek medical terms translated into Arabic.[44] To this, another and later hand has added some thirty more translations. Besides glosses, there are more substantial translations from the Arabic by Ioannes Aktouarios and Constantinos Melitiniotes, both physicians of the fourteenth century.[45]

Aristotelis Eftychiadis, in his summary of changes in drug therapy in Byzantium, identifies new forms of preparations, introduction of new substances, new uses of known substances, and, quoting Aetius, the modification of the composition of traditional preparations.[46] New substances came mainly from the East and are later recorded extensively in the thirteenth-century *Dynameron* of Nicholas Myrepsos.[47] The early fifteenth-century codex *Vaticanus graecus* 282, in a short section (ff. 433v–437r), records recipes culled from Arabic, Latin and Jewish sources.[48] Their efficacy is vouched for in marginal notes by an owner of the same manuscript who glosses a recipe, "I have tried it and it worked; marvellous".[49]

What now emerges is an empirical approach to the use of drugs and a readiness to embrace usage from further afield. Dioscorides, who claims to have travelled widely to acquire his knowledge,[50] appears to endorse this approach in his address to Areios with which the *De materia medica* begins.[51]

Tradition and experience

Dioscorides justifies his treatise on the grounds that it is bound fast to the art of healing.[52] If humoral theory and that of the four elements provide the rationale for pharmacotherapy, it is equally true to say that the effects of individual plants or minerals on the body were well known by custom and observation. How far the *xenôn* physician shared this approach ten or more centuries after the time of Dioscorides is unknown. There is, however, a recognisable mark of theory being open to moderation by experience in the *xenôn* texts; mixtures, quantities and dosage were within the competence of the physician, and his diagnosis took account

of the patient's characteristics or of place and season.[53] Generally, however, the *xenôn* texts omit the detail of therapies that incorporate regimen, the avoidance of contra-indicated foods, exercise, baths and rest.[54]

If there was flexibility in the use and preparation of drugs, a flexibility which the Austrian historian of Byzantine medicine Armin Hohlweg asserts was maintained by Ioannes Aktouarios in the fifth and sixth books of his *De methodo medendi*, did this extend to the institutional texts of the *xenônes*?[55] Their titles imply a collective endorsement of the contents, perhaps for reasons including economy in use of ingredients, an element of uniformity of clinical practice, and furtherance of the *xenôn*'s reputation for effective treatment. This last is dependent in great measure on the efficacy of the remedies as much as the abilities of the physicians.

Diagnosis, aetiology, prognosis

Chief among the abilities of today's clinical physician is that of discerning, from the patient's history, symptoms and signs for a differential diagnosis of possible affections, leading to a preliminary identification of the affection. The Byzantine physician was confined to his powers of observation for diagnosis and prognosis and was constrained by the tenets of humoral medicine. There was then, so far as may be judged, no concept of differential diagnosis, and his only other aids were examination of the patient's pulse, faeces, blood or urine. Of these there is no mention in the *xenôn* remedy texts, with the exception of two references in the *Prostagai* text. The first is about the examination of the patient's stools;[56] the second, the colour of his urine.[57] In their context, each is a symptom which necessitates the prescription that follows. There is no indication that they suggest an alternative diagnosis. Often the headings point only to the location of the sign or indication of the symptom; for example, an enlarged spleen is a sign that it may be associated with malaria, or certain anaemias or leukaemias. More commonly the cause may be infection or a circulatory disorder. The seventh-century physician Paul of Aegina practising in Alexandria identified the possibilities of obstruction or inflammation as causes of splenomegaly, and the symptom of fever, but little beyond.[58]

It is difficult, too, to determine what is meant by some terms used to describe affections. *Sarcoma* is a classified malignancy in modern medicine, but the ὑπερσάρκωμα (*hupersarkôma*) of the *Therapeutikai*, "the overgrowth of flesh", might be an affection ranging from benign to malignant.[59] More mundanely, the remedy for headache is silent about how it presents; it does not associate it with fever, extremes of hot or cold, or over-indulgence.[60] The broad differential diagnoses in headache of vascular or meningeal dilatation, nerve compression or referred pain clearly were not recognised, or recognisable. Many headings in remedy texts *Xenonika I* and *II* do no more than name preparations for general indications.[61] The *Prostagai* text, although recording signs and symptoms presenting at various stages of the affection in about half of its paragraphs, heads them by categories such as περὶ κοιλιακῶν (*peri koiliakôn*, "about stomach affections") and περὶ ἡπατικῶν (*peri hêpatikôn*, "about splenic affections").[62]

These obscurities in many of the remedy headings are rarely clarified by any reference to the theories of the elements and the humours in the text. The chapter on coughs in the *Therapeutikai* lists a number of remedies.[63] The text is silent on their specific application. In contrast, Paul of Aegina is clear that coughs are not only due to fluxes from the head but often arise from δυσκρασία (*duskrasia*, "bad temperament"), sometimes hot and sometimes cold.[64] They may also be symptomatic of other diseases including fevers. No such distinctions are assigned to the *xenôn* remedies. There are two possible conclusions to be drawn: either that the distinctions and causative theories were falling into desuetude, or that the physician's training and knowledge was adequate to allow him to choose the remedy suited to his diagnosis of the type of cough with which the patient was presenting. The latter is more persuasive if only on the negative grounds that a remedy text was, *prima facie*, compiled for brevity and relative ease of reference. The argument from presumed knowledge on the physician's part can be developed from the finite number of ingredients and their compounds that appear possible for an affection presented by the patient. To return to Paul of Aegina on the cough, he specifies different remedies and lists pills for catarrh with cough, an electuary, pills for inveterate coughs, an arteriac for hoarseness and bloody expectorations, and a trochisk for fumigation in the case of a continued cough.[65] The *Prostagai* include several of these categories of remedy for cough, but without describing the category of cough.[66] To the modern reader, it is reasonably evident to which category each recipe belongs by the instructions for its application. For example, there is a remedy to be spread on the chest (ἀλείφειν τὸν θώρακα, *aleiphein ton thôraka*), an inhalation (θυμίαμα, *thumiama*) and an electuary (ἀπόζεμα, *apozema*). Of the affections of which cough is also symptomatic according to Paul of Aegina, the *Prostagai* text lists two, pleuritic and hepatic.[67] Cough is a relatively good example of how a well-versed reader is enabled to use an otherwise elliptical text.

Multiplicity of remedies

The preceding argument offers some explanation for the plurality of alternative remedies under some headings, but one that is not universally applicable. There are four remedies for piles in the *Therapeutikai* text, mostly ointments, some potion, the use of leeches, and what appears to be a fumigant for the seated patient.[68] This range appears to signify the physician's freedom to use his clinical judgement. It could equally signify lack of confidence in the remedies.[69] Yet, remedies that were broadly of the kind in the *xenôn* texts had been in use for many centuries with largely unchanging *materia medica*; there was no real alternative. Given that many vegetable and mineral ingredients had long-recognised properties – for example, laxative, carminative or antiseptic – their effect was reasonably assured when used in the right circumstances. As for the rest, whether used as simples or in compounds, the presumption is that they worked in some circumstances, were inert in others, or were supplanted by *vis medicatrix naturae*. It cannot be assumed that none of them harmed the patient, either from dosage or their intrinsic property,

for the concept of the cure, if achieved, being worse than the disease has long been familiar in medicine.

Users of the text

It was not always a matter of taking remedies by mouth. Among the *xenôn* remedy texts, the *Therapeutikai* consist of topical applications including plasters, epithems, ointments and embrocations, and also include some potions. The *Therapeutikai* share with the remedy text of Ioannes Archiatros not only a common *incipit* but also detailed instructions on the preparation of the medicine or plaster. The *Prostagai* prescribe more widely; there are clysters, enemas, vapour treatments and baths (including the *enkathisma*, a sitz-bath), as well as simples, numerous compounds and ptisans. The ingredients of the compounds are usually listed. *Xenonika I* and *II* also prescribe treatment in many forms. They omit for the most part, however, quantities of ingredients, dosage and the properties of the ingredients (hot, cold, moist, dry by degree). In contrast, Theophanes Chrysobalantes, who wrote for a wider group of users, generally records quantities for, and qualities of, ingredients in his *Epitome de curatione morborum*.

The absence of instructions for quantity of ingredients and dosage deserves closer attention. Specification is taken as essential in modern medicine. In the Byzantine remedy texts, it is set down only sporadically, if at all. Paul of Aegina, who draws on Oribasius and Aetius in his section on compound medicines, is meticulous in giving quantities for each ingredient. The presence of remedies with ingredient quantities is therefore explicable where these are copied from a text in which they feature. The absence of quantities suggests that not only did πεῖρα (*peira*, "experience/experiment") dictate the proportions of ingredients but medicines were made up *quantum sufficit* for each patient. Similarly, an epithem would need to be made up in sufficient quantity for topical use. A potion might have to be taken early and late for several days and so on. To a physician versed in materia medica, the proportions and quantities were undoubtedly easily calculated unless there were numerous ingredients that warranted some indication of their measure because, for example, an excessive dose might be harmful. Hellebore provides just such an example.

It follows from this variety of practice either that the recipes for many compound remedies were well known and could be looked up if necessary in the older authorities or that it was open to the physician to use his clinical judgement and specify quantities as seemed suitable to the patient's condition and the stage or progress of the affection. That assumes that the texts were designed for the use of physicians.

The titles of the *Therapeutikai* and *Prostagai* texts clearly attribute the contents to physicians, but it is possible that they were for the use of dispensers acting on the instructions of physicians. The *Therapeutikai* text, for example, is replete with detailed instructions for the preparation of ingredients and the manufacture, usually by cooking, of the medicines or plasters. In a *xenôn* of any size, there is a presumption that an assistant or a dispenser would have carried out this work on instruction.

Three pharmacists are specified in the *typikon* of the Pantokrator *xenôn*, and two in the *Typikon* of the twelve-bedded Lips *xenôn*.[70] Whether these were pharmacists with their own expertise, or simply dispensers working under direction, is uncertain. The probability is that they possessed the expertise to which an imperial law (*Basilika*) of Leo VI (emp. 886–912) refers.[71] Among their duties must have been those of ensuring the quality and availability of ingredients, and overseeing the process of preparation, particularly in the case of cooking. They would have been responsible for storing them to best advantage, after the precepts of Dioscorides.[72] In the absence of one ingredient or another, they would be familiar with substitutes (ἀντιβαλλόμενα, *antiballomena*) or *succedanea*. There could be no guarantee of consistency each time a medicine was made up, nor could there be a guarantee, since this study is concerned with manuscripts, with the accuracy of the recipe at the hands of copyists. This is very apparent on comparison of the five manuscripts in which the *Prostagai* text is to be found.

Physicians in action

If physicians directed the pharmacists in the detail of making up the remedies from the elementary prescriptions of the texts, they were responsible for the dosage to be administered and its frequency. Dosage, rather as the specification of ingredient quantities, is largely disregarded in the *xenôn* texts, but this is not uncommon in most remedy texts.

We see the physician at work in the careful description of the treatment of a sore throat or inflammation of the larynx (κυνάγχη, *kunanchê*) in a note (πιττάκιν, *pittakin*) from an unknown physician Leo, dated to an indiction early in the thirteenth century.[73] There is no indication that Leo was a *xenôn* physician, but Theodore, the physician to whom he writes, bears the same name as a physician from the *Mangana xenôn* cited elsewhere in the medical compilation of codex *Vaticanus graecus* 299.[74] The link is tenuous if not non-existent, but the note is far from elliptical. It is rich in explanatory detail, including the instructions for phlebotomy, the amount of blood to be let and the site. Massage is prescribed for various parts of the body, and a gargle and external throat application set out in detail. This, says Leo, benefits sore throat and inflammation of tonsils and lungs. He concludes, addressing perhaps one of the physicians of Berroea to whom the note is also sent.

Another text from the same compilation dispels any temptation to see remedy texts as representative of a medicine that had left behind the skills of a physician in favour of a mechanistic application of remedies. This text is about the hand that became infected after phlebotomy.[75]

In this record the essentials of clinical practice are embodied. The patient's hand had become inflamed after a phlebotomy, perhaps through an infection incurred during the procedure or after it. The ingredients of the healing plaster and the method of its preparation and application are listed. The possible complication of a fistulous ulcer (or, more probably, a sinus perhaps associated with osteomyelitis) is taken into account, and a second dressing is described together with instructions

for diet. It is perhaps the closest that the reader of Byzantine medical texts comes to a description of medicine in practice.

Notes

1 See Horden 2007a: 140.
2 The *Miracula S. Artemii*, 21 (ed. and Engl. tr. Crisafulli and Nesbitt 1997: 124–131) relate the tale of the deacon, Stephen, who, after many treatments for his affliction, entrusts himself to the surgeons of the Samson *xenon*: . . . δίδωμι ἐμαυτὸν ἐπὶ τῷ χειρουργηθῆναι τοῖς χειρουργοῖς τῶν Σαμψών, καὶ ἀνέπεσα ἐν αὐτῷ τῷ ξενῶνι . . .
3 The ἀνάργυροι were the fourth-century saints Kosmas and Damianos, who performed cures without taking money, in contrast to the physicians who charged for their services. The Greek text of the account of their therapeutic miracles has been edited by Deubner 1907. A French translation is available in Festugière 1971: 97–213 with a study at 85–95. For a more complete analysis, the collection of material by David-Danel 1958 is still fundamental. More recently, see Julien et al. 1993.
4 Thomas 1987: 181–182.
5 Gautier 1974: 13–15.
6 Delehaye 1921: 184.
7 Miller 1997: xviii and 204.
8 *Miracula S. Artemii*, 22 (ed. and Engl. tr. Crisafulli and Nesbitt 1997: 130–131): . . . ἔτυχεν . . . νόσοις περιπεσεῖν χαλεπαῖς.
9 Nutton 1986: 220: "they (*xenônes*) could have housed only a minute fraction of the sick population of (Constantinople)." A calculation of "patient turnover" based on an average stay of twenty days in a hospital of fifty beds (for example, the Pantokrator *xenôn*) suggests that only some nine hundred patients a year would be accommodated in that one hospital.
10 The Pantokrator *xenôn* typikon apppears to refer to out-patient treatment in several ordinances: *Pantokrator typikon*, ll. 947–949, 975, 983, and 1286–1287 (ed. and Fr. tr. Gautier 1974: 85–87 and 105, respectively; Engl. tr. Jordan 2000: 757–758 and 765). The historian Ioannes Kinnamos (ca. 1143–1185), too, seems to speak of an out-patient *xenôn* dispensary: *Cinnamus*, *Historiae*, IV.21 (ed. Meineke 1836: 190, ll. 14–17). The Pantokrator *typikon* prescribes ward rounds in detail: *Pantokrator typikon*, ll. 965–968 (ed. and Fr. tr. Gautier 1974: 86–87; Engl. tr. Jordan 2000: 758).
11 *Miracula S. Artemii*, 6 (ed. and Engl. tr. Crisafulli and Nesbitt 1997: 88–89).
12 The ordinance in the Pantokrator *typikon* at ll. 947–949 (ed. and Fr. tr. Gautier 1974: 84–87; Engl. tr. Jordan 2000: 757–758) suggests that simple consultations, not necessarily leading to admission, were to be available at that *xenôn*.
13 Siraisi 1990: 117.
14 Siraisi 1990: 131.
15 Eftychiadis 1983b: 217–221.
16 See *Prostagai*, chapter 4, and *Therapeutikai*, chapter 19.
17 For example, see the chapter 59 of the *Therapeutikai*.
18 Stannard 1961: 517. For the frequency of gastro-intestinal affections, see also Horden 2000: 211.
19 Touwaide 2004a and 2007a.
20 The texts discussed are the *Therapeutikai*, the *Prostagai*, the *Mangana xenôn* excerpts, the Romanus text, and the *Xenonika I* and *II*.
21 *Miracula S. Artemii*, 21 (ed. and Engl. tr. Crisafulli and Nesbitt 1997: 124–131).
22 See chapter 11 in the *Therapeutikai*.
23 See, for example, Jones 1998: 43 (fig. 33), 47 (fig. 36) and 73 (fig. 66).
24 See codex *Vaticanus graecus* 305, ff. 31v, l. 10–33r, l. 6 (reproduced in La Porte-du Theil 1800–1801: 545–548; on this manuscript, see Mercati and Franchi de' Cavalieri

1923: 443–450), and also *Theodorus Prodromus*, *Poemata*, 77 and 78 (ed. Hörander 1974: 544–546 and 547–549). According to La Porte-du Theil 1800–1801: 532–539, the illness may have been smallpox ("petite vérole").

25 See Harris 1995: 10 and n4.

26 See the data and analysis by Congourdeau 1999: 377–390.

27 Temkin 1962: 113.

28 *Romanos, De acutis et chronicis morbis*, proem: ". . . τοῦτο τὸ βιβλίον βραχέως καὶ συντόμως πεποίηκα" (ed. Criscuolo 1996: 120, ll. 3–4, based on the manuscript of Vienna, *medicus graecus* 48; see also Kousis 1944b: 163, l. 5, based on the manuscript *Vaticanus graecus* 280, with a slightly different text). Ioannes Aktouarios set out with a similar intention for his *De methodo medendi*, 1 (ed. Ideler 1841–42: 2.353, l.15): ". . . βραχισύλλαβος δέλτος . . .".

29 These are the words used by Jacquart 1993: 270 (English translation 1998: 204) to describe Constantine the African's activity, who, according to her, was emulating Byzantine encyclopaedias' scope.

30 On this manuscript, see Devreesse 1945: 109–111, especially 111 for these four folios.

31 Among the abundant literature devoted to this manuscript, see principally Mercati and Franchi de' Cavalieri 1923: 430–437.

32 *Pantokrator typikon*, ll. 1176–1290 (ed. and Fr. tr. Gautier 1974: 98–104, with a commentary at 12–15; Engl. tr. in Jordan 2000: 762–765).

33 *Ibid.*, ll. 947–948 (ed. and Fr. tr. Gautier 1974: 85–87; Engl. tr. in Jordan 2000: 757).

34 On this identification, see Sonderkamp 1984, who established the identity of Theophanes Nonnus as Theophanes Chrysobalantes.

35 See *Prostagai*, chapters 1, 5, 11, 13, 14, 15 and 16 for phlebotomy.

36 The text is described with some detail by Daremberg 1853: 22–30.

37 Miller 1985: 174. When Miller prepared his study, no critical edition of Ioannes' text was available.

38 Miller took the generally accepted view until Zipser's edition (published in 2009) showed that Ioannes was active in the seventh century.

39 Mercati and Franchi de' Cavalieri 1923: 390 (f. 437r): "Τροχίσκος εἰς αἱμασσόμενα οὖλα . . . οὗτος πεπόνηται ἡμῖν, ἀπό τε λατινικῶν βίβλων καὶ ἑλληνικῶν ἐξερανισθείς . . . ὡς ἡμεῖς πεπειράμεθα · τοῦτον δόκιμον εὑρόντες ὡς ἐμοὶ δοκεῖ, οἱ περί τε Λέσβον καὶ Χῖον καὶ Εὔριππον ἰατροὶ· ὡς ἄριστον ὀδοῦσι βοήθημα · χρῶνται τούτῳ· ἐπαινοῦντες σφόδρα . . .". Among the writers to whom the remedies are ascribed is Ιω. τοῦ Σταφιδάκη.

40 Lieber 1984: 236. According to Benjamin Tudela (1130–1173), who travelled in the Mediterranean and Western Asia, from Tudela in Spain up to Baghdad and further, during the years 1169–1171, the Egyptian Jew Solomon Hamitsiri was physician to the emperor Manuel I (emp. 1143–1180). See *Binyamin mi-Tudelah*, *Sefer Masa'ot* (ed. and tr. Adler 1907: 24 [Hebrew text] and 14 [Engl. tr.]).

41 On Ibn al-Mutran, see Ullmann 1970: 165–166; and Makdisi 1990: 61 and 75.

42 See *Vaticanus graecus* 299, f. 374r, l. 23–374v, l. 4. See Bennett 2013: 88 and n27. The text reads as follows (f. 374r, ll. 23–29): "βοήθημα καθαρτικὸν ἐπί τε ἡπατικῶν ἰκτερικῶν καὶ σπληνικῶν καὶ ἰσχιδιακῶν ἀλιλέκχ, ἤγουν χρυσοβάλανον, μέλαν ἰνδικὸν ϛΓ β΄, βελιλέκτου ἤτοι χρυσοβαλάνου δέρματος κιτρίνου, ἐλίλκης ἤτοι χρυσοβαλάνου κιτρίνου ἀνὰ ϛΓ β΄, ἐλιλικίβουλ, τουτέστι χρυσοβαλάνον μέγα ϛΓ β΄, ἐμβλήκτον τουτέστι χρυσοβαλάνου σχιστοῦ μελανοῦ ϛΓ β΄, τούρβια, ὅ ἐστι ῥιζάριον σαρακηνικὸν, ὃ λέγεται ἀλυπία ϛΓ α΄, βονεσφικτου τουτέστιν ἴα βένετὰ ϛΓβ . . .".

43 *Vaticanus graecus* 300, f. 273r, ll. 23–24 and 24–25 respectively: "ἰδίωμα λέγεται παρὰ τῶν ἀράβων χασσιαὶ λέγεται καὶ προπετιᾶς" and "οἱ ἄδηλοι πόροι, σαρακινιστή· ἐττου χάλχουλ· ἄλλοι δὲ ἐλμεσέμ". On the latter, see Bennett 2013: 87.

44 There are two different lexica on f. 599v (and not 590 as in Mercati and Franchi de' Cavalieri 1923: 424): ll. 16–27 and 27–34. The former is meant here. On it, see Touwaide 1997: 216; and Bennett 2013: 87. At f. 464v, ll. 5–9 in this codex is a remedy entitled

(ll. 5–6) as: "διὰ πείρας τὸ τοῦ Σύρου Νικολάου τοῦ Οὐλέλη πρὸς ἕδραν ἐξερχομένην παιδίων . . .".

45 For Ioannes Aktouarios, see *Vaticanus graecus* 292, ff. 211r–232v: "πραγματεία περὶ οὔρων βαρβάρων, μετενεχθεῖσα εἰς τὴν Ἑλλάδα παρὰ τοῦ ἰατρικωτάτου Χριστοδούλου, εἰς ῥυθμὸν δὲ καὶ τάξιν Ἑλληνικὴν ἐκτεθεῖσα παρᾶ τοῦ σοφωτάτου καὶ ἰατρικωτάτου τοῦ ἀκτουαρίου κυροῦ Ἰωάννου τοῦ Ζακαρίου". For Melitiniotes, see the *incipit* of his treatise contained in manuscript *Parisinus graecus* 2194, ff. 400v–404v: "αὗται αἱ ἀντίδοτοι ἐμεταγλωττίσθησαν ἐκ τῶν Περσῶν εἰς τὴν Ἑλλάδα παρὰ Κωνσταντίνου ἰατροῦ τοῦ Μελιτινιώτου ἐκ Κωνσταντινουπόλεως". On this work, see Kousis 1939: 205–220.

46 Eftychiadis 1983b: 257–258, and especially 258 (d) in respect of the modification of preparations.

47 Nicholas Myrepsos' *Dynameron*, which shows Arabic influence, contains 2,656 recipes classified by their pharmaceutical properties. It was sufficiently influential in Western Europe to be the official pharmacopeia of France until 1637. Its Greek text is still unpublished. See the Latin translations published in 1541 by the German physician Johann Agricola (1496–1570) (medieval translation) and in 1549 by his colleague Leonhart Fuchs (1501–1566) (Renaissance translation), with two editions: 1549 and 1550.

48 On this manuscript, see Mercati and Franchi de' Cavalieri 1923: 384–391. As examples of the different recipes for medicines, see f. 434v, ll. 18–23: "φάρμακον συντεθὲν παρὰ ἰουδαίου ἰατροῦ τοῦ βενιαμίν"; f. 436r, l. 4 *ab imo*-436v, l. 3: "πυρία στομαχικὴ μαστρογιράρδον λατινική"; ff. 436v, l. 4 *ab imo*-437r, l. 3: "ἀντίδοτος λατινικὸς τοῦ ἀβέροες".

49 *Vaticanus graecus* 282, f. 437r, cited in Mercati and Franchi de' Cavalieri, 1923: 390.

50 *Dioscorides*, *De materia medica*, praef., § 4 (ed. Wellmann 1906–14: 1.2, ll. 17–18; Engl. tr. in Beck 2005: 3).

51 *Dioscorides*, *De materia medica*, praef. (ed. Wellmann 1906–14: 1.1–5; Engl. tr. in Beck 2005: 1–5). On this preface, see Scarborough and Nutton 1982.

52 *Dioscorides*, *De materia medica*, praef., § 5 (ed. Wellman 1906–14: 1.3, ll. 13–15; Engl. tr. in Beck 2005: 3).

53 Stephanos – *archiatros* of the *Mangana xenôn*, in his letter to a fellow physician on stomach, spleen and liver remedies – observes at one point in his recipes: " . . . κατὰ τὸν θερινὸν καιρόν, καὶ μάλιστα ὅταν κυνοκαύματα· συχνάζειν δὲ μάλιστα κατὰ τὸ φθινόπωρον καὶ τὸν χειμῶνα καὶ ἔαρ . . ." (*Vaticanus graecus* 299, f. 368v, l. 24).

54 Some treatments in the *Therapeutikai* have the remedy administered to the patient in the bath or on coming out of the bath (chapters 31, 48, 60 and 66).

55 Hohlweg 1984: 131.

56 *Prostagai*, chapter 4 (περὶ κοιλιακῶν, *peri koiliakôn*, bowel troubles), three references to faeces: " . . . εἰ γὰρ θερμὰ τὰ διαχωρήματα . . . εἰ δέ εἰσι ψυχρὰ τὰ διαχωρήματα . . . εἰ δὲ πονηρὰ φέρει ἡ γαστὴρ διαχωρήματα . . .".

57 *Prostagai*, chapter 1 (περὶ πυρετῶν, *peri puretôn*, on fevers) " . . . σφοδροῦ δὲ ὄντος τοῦ πυρετοῦ καὶ τῶν οὔρῶν ἐρυθρῶν . . ." (. . . *red* [i.e., bloody] *urine* [i.e. hematuria]).

58 *Paulus Aegineta*, *Epitome medicinae*, 3.46 (ed. Heiberg 1921–24: 1.249–251 for liver affections and especially 250–251 for its inflammation; Engl. tr. Adams 1844–47: 1. 560–564, especially 560).

59 *Therapeutikai*, chapter 41.

60 *Therapeutikai*, chapter 1.

61 See the *Prostagai*, paragraphs 6 (f. 441v, ll. 3–8: ἀλειφὴ θερμή), 10 (f. 441v, ll. 25–28: σκευασία τοῦ λάχα), 14 (f. 442r, ll. 10–16: σκευασία θυμιάματος μοσχάτου), 15 (f. 442r, ll. 16–17: τὰ πεντάειδα κοκία), 28 (f. 443r, ll. 21–24: ἔλιγμα μελαντικόν), for example.

62 *Prostagai*, chapters 4 and 5.

63 *Therapeutikai*, chapter 58.

64 *Paulus Aegineta*, *Epitome medicinae,* 3.28, § 1 (ed. Heiberg 1921–24: 1.205, ll. 23–25; Engl. tr. Adams 1844–47: 1.470).

65 *Ibid.*, 3.28, § 3–13 (ed. Heiberg 1921–24: 1.207, l. 8–209, l. 18; Engl. tr. Adams 1844–47: 1.470–473). For the the trochisc here (τροχίσκος καπνιστός), see 1.209, ll. 15–18. It was presumably a compressed cake of six ingredients which, on heating, gave off fumes.

66 *Prostagai*, chapter 12.

67 *Paulus Aegineta*, *Epitome medicinae,* 3.28 (ed. Heiberg 1921–24: 1.205, ll 26–27; Engl. tr. Adams 1844–47: 1.469–473), and *Prostagai*, chapters 13 (περὶ πλευριτικῶν) and 14 (περὶ ἡπατικῶν).

68 *Therapeutikai*, chapter 49 (εἰς ἐξοχάδας), with the following remedies: ointments (. . . ἐπίχριε . . . ἐπίχριε . . .), a potion (. . . πότιζε μετὰ οἴνου), leeches (βδέλλαν), and a fumigant (. . . καθίσῃ ὁ ἀσθένων καὶ δέξεται τὸν καπνόν . . . ὁμοίως κάπνιζε).

69 See Bennett 2000: 284, and, previously, Stannard 1984: 207.

70 See *Pantokrator typikon*, l. 997 (ed. and Fr. tr. Gautier 1974: 89; Engl. tr. Jordan 2000: 759) and Lips *typikon*, § 51 (ed. Delehaye 1921: 134, l. 29).

71 See Eftychiadis 1983a: 73.

72 See the detailed instructions of *Dioscorides*, *De materia medica*, praef., § 6–9 (ed.Wellmann 1906–14: 1.3–4) starting with the following recommendation (§ 6): "πρὸ πάντων οὖν φροντίζειν τῆς ἀποθέσεως καὶ συλλογῆς ἑκάστου κατὰ τοὺς οἰκείους καιροὺς προσήκει . . ." (Engl. tr. Beck 2005: 3–5 for this whole section and 3 for the introductory phrase of § 6).

73 *Vaticanus graecus* 299, ff. 344v, l. 13–345r, l. 12.

74 *Vaticanus graecus* 299, f. 368r, ll. 19 for the name, and ll. 19–21 for the whole formula.

75 Codex *Vaticanus graecus* 299, f. 422v, ll. 15–29. See also codex *Laurentianus* Antinori 101, f. 362v, ll. 1–20 which reads: "εἰς φλεγμονὴν χειρὸς φλεβοτομηθείσης. ἐκ τοῦ ξενῶνος καθὼς ἐδιδάχθημεν · λινοσπέρμου λελειωμένου μέρος α΄ · κριθίνου ἀλεύρου μέρη β΄ · χοιρείου στέατος ἀπάστου τὸ ἀρκοῦν · ῥοδίνου ἐλαίου · βάτου φύλλων · ἀρνογλώσσου πολυγόνου · στρύχνου λειωθέντα, πρότερον δὲ τό τε λινόσπερμον κεκομμένον καὶ τὸ κρίθινον ἄλευρον ἑνωθέντα σὺν χοιρείῳ στέατι καὶ ὕδατι, οὕτω ἐπιβάλλειν τὰ λοίπα σὺν τῷ ῥοδίνῳ ἐλαίῳ, καὶ μετὰ τὸ ἑψηθῆναι, ἑνῶσαι τοῖς κροκοῖς τῶν ὠῶν · εἶθ' οὕτως ἐφαπλοῦν καὶ κατὰ τῆs φλεγμονῆς ἐπιτιθέναι · ἀλλάσσων καθ' ἑκάστην ἡμέραν δεύτερον · ἕως ἀφλέγμαντος γένηται · εἰ δὲ καὶ πολλάκις κόλπωσις γένηται, δεῖ ἀναστομοῦν καὶ ἀναμόττειν καὶ ἐκ τῶν ἐμπλάστρων τῶν ἀποκρουστικῶν ἐπιτίθεναι τήν τε ἀνετὴν καὶ τὴν μνασαίου καὶ διὰ μέλιτος καὶ διὰ μοταρίων ἤ ξαντοῦ καὶ τὴν τετραφάρμακον · διὰ δὲ τὰς φλεγμονὰς προστάττειν ἀπέχεσθαι οἴνου · λαμβάνειν δὲ χυλάριον · ἢ χυλὸν κρίθινον · ἕως ἀφλέγμαντος γένηταί ἐστὶ δὲ ἐπὶ τούτοις καὶ τὸ ψιττάκιον καὶ ἔμπλαστρον καλόν". A free translation, omitting the ingredients with which the remedy begins, reads: "Then simply apply it (the remedy) to, and spread it over, the inflammation, changing it each day afterwards until (the hand) becomes free from infection. But if, as often, a fistulous ulcer [sinus] occurs, you will need to open it up and dress it and apply anti-inflammatory plasters [listed]. And because of the inflammation, tell the patient to abstain from wine and take a little juice, say barley water. Until (the hand) becomes free from inflammation, keep the ointment and a good plaster in place".

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3 Can history be written from manuscripts?

I find a vast chaos of medicines,
A confusion of receipts and magistrals, amongst writers . . .
Robert Burton, *Anatomy of Melancholy*, II, 5.1.3

In his master work, the *Anatomy of Melancholy*, the Oxford scholar Robert Burton (1577–1640) speaks twice of a "vast chaos and confusion", both of medicines and, later, of books. Medicines and books or, here, remedies and manuscripts are the subjects of this study. The manuscripts under analysis record remedies ascribed to hospitals and are the only source through which we can catch sight of early pharmacotherapy and the composition of medicines of late Byzantium. The medicines are no longer dispensed, and all that remains are some manuscript copies of the recipes; of their number are the few copies of *xenôn* remedy texts of the period from 1204 to the fall of Constantinople in 1453; some are of later date, witness perhaps to the continuing interest in their contents.

The sources of the remedy texts often go back at least as far as Galen (129–after 216[?]), but the texts discussed in this book most probably originated in the tenth century, a time of excerpting and compiling digests of earlier medical texts.

Among the estimated number of some 2,200 extant Greek medical manuscripts of all types,[1] there seems to survive only seventeen manuscripts that contain *xenôn* texts.[2] If the number of medical manuscripts lost over the centuries were calculable, it is clear that the legacy of *xenôn* remedy texts would be infinitesimal, and, without their ascription to *xenônes*, they would probably have gone unobserved among the number of therapy texts and fragments that are dispersed, *adespota*, throughout the extant Byzantine medical codices.

There might be an expectation that a text that reputedly originated in *the Byzantine ancestor of the modern hospital* will have about it some distinctive mark of institutional clinical practice or give some underlying indication of local morbidity patterns. There is no ostensible evidence of either. The remedies in the texts seem, on the contrary, as much for common everyday affections capable of treatment on the spot as those more likely to justify hospital admission.

Earlier scholarship

Scholarship has given little attention to the *xenôn* remedy texts. In 1853 Charles Daremberg had discussed some manuscripts of the text described throughout this study as *Therapeutikai* and compared it with a remedy text attributed to Ioannes Archiatros.[3] The *Therapeutikai* were also the subject of Edouard Jeanselme's paper in which he touches only briefly on its place in *xenôn* medical practice.[4] After discussion of the remedies and *locus in codice* of the text in each of the three manuscripts then available to him, he asks:[5]

> L'aide-mémoire de thérapeutique . . . était-il déposé dans la bibliothèque d'un hôpital? C'est peu vraisemblable.

Nothing, however, had been written about the influence of *xenônes* on Byzantine medical literature except by the indefatigable Greek historian of medicine Aristotelis Kousis (1872–1961) in the short introduction to his "Contributions à l'étude de la médecine des zénons *[sic]* pendant le XVe siècle".[6] He foreshadows in a few paragraphs many of Timothy Miller's observations about the part that *xenônes* played in the assembling of medical compilations. More recently there have been papers on the *Apotherapeutikê* of Theophilos and the medical manual of Romanos.[7] If the compilation of these texts originated in *xenônes*, it should follow that the *xenôn* had much to do with the preservation, interpretation and transmission of the Byzantine inheritance of medical literature.[8]

The paucity of *xenôn* texts is owed as much, perhaps, to the vicissitudes of textual transmission, as to their relatively circumscribed institutional use, or to the likelihood that some *xenôn* texts from that period have remained unrecognised, because unattributed, in the codices. It is possible to envisage, too, the dependence of the *xenônes* on the canonic medical writers for reference and education, as well as on manuals of their own devising for day-to-day medical practice, so weakening the demand for new compilations or even new writing. Yet perhaps the texts used in *xenônes* were acquired according to need; there was a recognition of the importance of preserving earlier medical writings; and this was best done in the form of excerpts, epitomes and the distinctive mediaeval genre of compilations.[9]

Authenticity of the *xenôn* texts

How certain is it that the remedy texts of this study have their origins in *xenônes*? The evidence rests alone on titles or internal evidence of *xenôn* usage that support four of the texts (*Therapeutikai*, *Prostagai*, *Xenonika I* and *Xenonika II*); another, the united text of Romanos, is prefaced by a descriptive proem.[10] The sceptical might, nonetheless, argue that titles were, at some stage in transmission, the invention of a scribe so as to give authority to the contents under the guise of their purported hospital use. That argument relies on an assumption that *xenônes* generally were held in high regard and that a text's association with one gave it authority.

It is doubtful, though, whether generalised opinions of this kind were held or that physicians, their users, would have been particularly influenced. *Cui bono*? If the writings of the hagiographers are admissible evidence, physicians generally had been held in poor esteem until the late centuries of Byzantium.[11] Hippocrates and Galen alone were held in respect through the centuries.

The argument of the sceptics should not be dismissed peremptorily. Descriptive titles have misled often in past ages and even now. Giannis Karas, in his census of Greek scientific manuscripts and works of the Ottoman period, has implicitly warned against the formulaic nature of attributions to the *xenôn* in post-fourteenth century manuscripts.[12] The authority of a text depends on the perceived likelihood that it is authentic, but there is value in testing descriptive titles of texts of this nature. The numerous copies and part-copies of the *Therapeutics* of Ioannes Archiatros, for example, have various titles, some attributing the work to Ioannes himself, some to Galen and some being *adespota*.[13] Similarly, manuscripts produced during the *Tourkokratia* sometimes attribute works jointly to Hippocrates, Galen and at least one other physician to give a spurious authority to their workaday contents.[14] In some manuscripts, *xenôn* medical texts have lost any title they may have had during transmission, as the *xenôn* text *Therapeutikai* will show.[15] This mutability of title accompanies the related and prospective complication of texts that have lost their *xenôn* attribution in transmission, no other copies having survived or been made. Equally liable to scrutiny are titles that appear specific only to the extent that they are described as having a *xenôn* provenance, as in some late catalogues of Byzantine manuscripts. Aristotelis Kousis quotes the catalogue of the books of a Kantakouzenos which records, *inter alia*, "a large book that opens with Galen of the *xenôn*".[16] Matters are further confused by the apparent loss of the meaning of *xenôn* as *hospital* in later centuries, even to the extent that in one title it was read as a proper name by the eighteenth-century cataloguer.[17]

Authority in a *xenôn* text

The authenticity of a *xenôn* text underpins its authority as a transmitter of knowledge, source of reference, *vade mecum* and aide-mémoire. In turn *xenôn* texts rely on earlier compilers of remedies who had become authorities to later generations within a system of medicine that had been pre-eminent for many centuries and had its origins in the enquiries of earlier generations.

The texts studied in this book draw not only on early compilers but also on their successors who, in a transference of authority, themselves had borrowed, reshaped and re-organised their writings. Whilst the survival of manuscripts from the middle Byzantine centuries has been fortuitous, some medical writers had a greater utility than others and so may have been copied more frequently. Witness to this are the three fragments (two very brief) of Romanos' medical text and, in contrast, the hundred and more copies of one or more of the texts (or extracts from them) of the three medical and dietary works of Theophanes Chrysobalantes. The *xenôn* texts, both remedy and treatment, self-evidently had a usership differing to some degree

from that of the work of Theophanes – that is, the *xenôn* physician in contrast to the seeker after medical knowledge.

There are some tenuous textual reminiscences of Theophanes in the *Therapeutikai*, but there are also several links between the *Therapeutikai* and another work, probably of the thirteenth century, the *Therapeutics* of Ioannes Archiatros. Barbara Zipser, in the introduction to her edition of the text, remarks that there are strong parallels to Theophanes Chrysobalantes and the text identified here as *Therapeutikai*.[18] She goes on to postulate the existence in those centuries of a corpus of diseases "used as a grid" by both writers, and by extension and inference, in the compilation of the *Therapeutikai*.

On the surface, this supposes the greater authority and utility of Theophanes' works, even when subject to the vicissitudes of transmission. Comparison with the *xenôn* texts distinguishes Theophanes for reasons best expressed in terms of originator, purpose, access, usership and means of transmission.[19] Theophanes wrote by imperial command, for a readership that did not have easy access to physicians, in a summary and accessible style. The *xenôn* texts are generally the bare bones of medicine, stripped of theory and detailed description, and adequate for a practising physician's reference needs. For the *xenôn* physicians, πεῖρα *(peira*, "experience") and *what works* make a sound foundation for the care and medical needs of the needy and sick poor.

Titles and proems

It is to some extent misleading to speak of titles of the *xenôn* texts of this study; in three of them it would be more appropriate to speak of a short proem, not addressed to emperor, patron or friend (as that of Theophanes Chrysobalantes), but simply setting out purpose and application. These proems are reproduced in the chapters dealing with the texts they open. A translation of each is set down here to enable assessment of their potential authenticity:

(*Therapeutikai*) Therapeutic medical treatments set in order by various physicians according to the defined system of classification of the *xenôn*.

(*Prostagai*) Prescriptions and classifications (of disease used in) the great *xenônes*, of the kind that physicians use, from experience, for healing, particularly for all the patients in the *xenônes*.

(Romanos) (The work of) Romanos, *koubouklêsios* of the great and holy Church of God (and) *protomenutês* of the Imperial *xenôn*, consecrated to the Virgin.[20]

I have thought it fit that we should not deprecate those (physicians) who tread the highways and byways, for their inability to carry heavy burdens in their travels.[21] For this reason I have written a concise and short narrative (based on) my own experience and the authority of the ancients about acute and chronic affections; this I am handing down in summary form. It is surely right for us, in our purpose of instruction, to call on Christ the true God to be our helper and guide in accomplishing this (task) precisely and practically. So we must first give a definition of the diagnosis and treatment of fevers.

The first two proems, though brief, maintain an anonymity combined with a sense of common purpose that is a welcome change from the ambitious narration of the names of the great physicians of the past to whom remedy texts are often attributed. That of Romanos is more traditional in form, setting out purpose, description and intended form, and calling on Christ in aid of these intentions.

All three are for the use of physicians, the first two (*Therapeutikai* and *Prostagai*) endorsed by their *xenôn* provenance, the third written by a senior *xenôn* physician for didactic purposes and covering a fuller range of affections than the *Therapeutikai* and the *Prostagai*. Its link with a senior *xenôn* physician is echoed in the *Apotherapeutiké* of Theophilos, which is a portion of the Romanos text that, when recombined with the original, completes it. This separated text bears a proem that relates its sources as *various xenôn books* in an echo of Romanos the senior *xenôn* physician.

There remain the texts of the *Xenonika I* and *Xenonika II*, and the Mangana *xenôn* remedies. Both *Xenonika* texts lack proems of any kind, but *Xenonika II* contains references to the unknown *Mauraganos xenôn* as a source of some of the remedies. The Mangana remedies appear to be no more than excerpts from a lost remedy list, some of which also appear in the *Prostagai*.

The proem of Romanos has a reasonable claim to credibility in proclaiming its intention to provide a conveniently portable reference book, drawn from many sources, for physicians visiting patients. Together with the circumstantial evidence of Romanos' two offices in church and *xenôn*, the proem is sufficiently compelling to be accepted.

The tenor of the proems to the *Therapeutikai* and the *Prostagai* is little more than that of factual statements that provide not so much an introduction to the contents as the conventions by which they were recorded in the case of the *Therapeutikai*, and the categorisation of the text in the case of the *Prostagai*. Their absence would simply consign the texts to the large body of *adespota* of their kind; their presence is invaluable for an ascription that is neither authorial, professional (as legal or military) nor social, but institutional in the form of a generic group of premises in which the healing art is practised. Their wording suggests an institutional idiom. For example, *the defined system of classification of the xenôn* of the *Therapeutikai* implies the discipline needed in all aspects of hospital life. *Prescriptions and classifications (of disease used in) the great xenônes* of the *Prostagai* reiterates that need for discipline in the common cause of good practice. The τύποι (*tupoi*, "classifications") of the *Prostagai* correspond to Galen's customary use for the *type* (or form) of diseases, especially fevers, and the order and spacing of their attacks.[22] Each proem portrays a physician's mode of expression. Might either proem have been added at some later date to existing texts to give them a false cachet of *xenôn* usage not rightly theirs?

Pari passu, the same question may be asked of the attributions to the Mangana *xenôn* and the hitherto unknown *Mauraganos xenôn* respectively in other remedy texts in which some remedies are ascribed to individual and named physicians of the hospitals. One physician is described as *imperial physician* and another *imperial archiatros* (perhaps *principal medical officer*).[23]

The antepenultimate remedy in two of the manuscripts of the *Therapeutikai*, both of which are dated to the fifteenth century, is undoubtedly a late addition to the text; it is entitled *On the great decoction of the xenôn*.[24] The response *cui bono?* is once again reasonable. To cavil at these citations is wilfully to seek a quarrel over workaday texts, not literature.[25]

Other internal evidence for institutional practice subsists in the selective structure of each text in this book, the *Therapeutikai* in particular.[26] There is no attempt to provide treatments or remedies for a wide range of affections *a capite ad calcem* in the manner of the larger works by Ioannes Archiatros or Theophanes Chrysobalantes. The contents instead arguably reflect the common affections and symptoms almost certainly to be found in Byzantine communities – whether village, town or city – and exclude affections encountered only once or twice in a physician's working life. As for complications, in medicine it is a truism that common things occur commonly.

The *xenôn* remedy text in general confines itself to the affections most commonly presenting where physicians gather, here the *xenôn*. These affections are the everyday afflictions of the body that lend themselves to tried treatments not necessarily available to the community outside the *xenôn*.

There can be no assumption that the most recent copy of a text is the final form that the text took since each copying might adapt to meet the needs of the new user. Fluidity is its mark.[27] The remedy text in general has no literary form and is therefore open to addition and deletion, as well as to omission, errors of orthography, dittography, incomprehension and misreading (perhaps of singular importance where dosage is specified).

The *Therapeutikai* illustrate many of these elements in their extant manuscripts that span some three centuries or more. In turn, the descent and relationships of each manuscript emerges from their study.

The text of the *Prostagai*, though having only five discovered copies and part copies so far, shows variant readings that suggest, through their expansion of parts of the text, a physician's hand copying the work. That a physician may have copied a remedy text is far from proof of its origin in a *xenôn* but suggests a confidence in – and use for – a simple remedy book from that source.

Lists of remedies

A feature of *xenôn* and other remedy texts is the recording of two or more remedies for an affection. To some this was "a virtual admission that none was predictably reliable".[28]

A particular feature of the texts of this book and those with which they will be compared is the number of ingredients used in any one remedy. Initially the remedies comprised one or two ingredients (excluding the excipient, such as water), but latterly the compounds were to become increasingly complex. The texts *Xenonika I* and *Xenonika II* and the *Dynameron* of Nicholas Myrepsos each illustrate this tendency towards polypharmacy. The use, on occasion, of seventy or more ingredients in a single remedy is far removed from the Hippocratic observation that "most

(diseases) are cured by the same thing that caused them".[29] The complexities lie in how, as Nancy Siraisi notes, to determine "the overall effect of combining ingredients of different qualities in different intensities into a compound medicine",[30] so restoring the balance of humours in the body from whatever disproportionate deviation had taken place.

Byzantine texts are generally spare in supporting guidance in the use of herbs. Discussion of theory, diagnostics and semiology was usually confined, if present at all, to the title of each remedy recipe. Dosage and posology were not consistently added to each recipe, although directions for preparation of the remedy were sometimes included. Remedy texts were then little more than simple lists of ingredients for use in recipes but now are witnesses to the ancient medical use of plants, animal matter and minerals. Why then examine the *xenôn* texts in particular when so many Byzantine remedy texts, both *adespota* and attributed, survive from the centuries before, and throughout, the *Tourkokratia*?[31]

A further aid to survival of these texts may be the element of prescriptiveness implicit in the titles of the *Therapeutikai* and the *Prostagai*. That of the *Therapeutikai* in translation refers to *the defined system of classification of the xenôn* with the inference that the *xenôn* physicians should generally use only the listed remedies of the contents, in the manner of a formulary in a modern hospital. The second example comes from the *Prostagai* whose title in translation refers to "[p]rescriptions and classifications . . . of the kind that through experience physicians use for healing." There is less emphasis here on prescriptiveness, more on experience and *what works*. Such texts, written for a specific place − here the *xenôn* − are selective in the affections for which they record remedies, in contrast to comprehensive pharmatherapeutic texts that omit no affection save the rarest.

Remedies for uncommon affections would be accessible to a *xenôn* physician, when needed, in comprehensive pharmacological texts such as Book VII of the *Epitome medicinae* of Paul of Aegina. The cost of acquiring laboriously produced and costly copies of these works, particularly in the years after 1261, was probably heavy and not necessarily affordable by *xenôn* or physician.[32]

Empiricism sometimes has its own controls, not least the availability of ingredients. To import material was probably expensive, not always reliable at time of need, and possibly liable to falsification by unscrupulous merchants.

The reading of *xenôn* texts needs to take some account of the economic and practical circumstances of their age. In the Late Byzantine period, the *xenôn* remained an urban concept, and the little evidence of and for it, mostly from literary sources, is largely centred on Constantinople. The Latin conquest in 1204 and the occupation of the city undoubtedly affected its institutions, and the effects of that foreign rule until 1261 damaged economic stability.[33] The period from 1261 to 1453 was initially one of recovery within the dwindling territories of the once extensive empire. For Constantinople it was, too, a time of resettlement and reconstruction after years of impoverishment during the Latin occupation.

The texts of this book may have had their origins in the eleventh and twelve centuries, but the evidence of the hands in extant copies is that their copying took

place between the thirteenth and sixteenth centuries. Where the copies originated remains unknown.

The 1258 capture of Baghdad by the Mongols also led to a diaspora that arguably aided the transmission and dissemination of books and other recorded material. In the subsequent years, there is evidence of mobility amongst neighbouring peoples in the Mediterranean world as the entries for physicians in the Palaeologan prosopography suggests.[34] The *collectanea* of remedies and treatments in codex *Vaticanus graecus* 299 give further evidence of this mobility in, for example, the remedy of the *Sarakênos* physician working at the *Mangana xenôn*.[35] The early fifteenth-century codex *Vaticanus graecus* 282, in ff. 433v–437r, records recipes culled from Arabic sources, Armenian (the *Taronitae* family), Latin, and Jewish (*Benjamin*), and Averroes.[36] Eastern influences were beginning to be felt more strongly in pharmacology.

The effectiveness of the remedies in the texts can generally never be gauged, nor can the recipes be replicated today in any meaningful way, for frequently they give no measures for each ingredient or for dosage; nor is it generally safe to indulge in retrospective diagnosis from the description of the affection for which the remedy is prescribed. Often there is uncertainty about the identity of an ingredient, not only the more common ones, but many from Eastern sources. Above all, the rationale for the preparation of compounds, especially the complex ones, is not readily apparent even when it is possible to single out the effective ingredient.[37]

Drugs effective for specific affections stood the best chance of transmission through the centuries, perhaps marginally changing in the course of their journey but still recognisable; Galen himself borrowed heavily from earlier writers,[38] as did the great scholar physicians of Byzantium and, nearer to the date of the *Theapeutikai*, Theophanes Chrysobalantes.[39] There is clearly a core of remedies that have a common origin, even though they may have been added to, modified or diminished over the centuries. Specificity of an ingredient is more easily recognisable, not least by the agency of Dioscorides who recorded the values of individual ingredients in the five *books* of his *De materia medica*.

But the extent to which new remedies were devised is more difficult to determine. Armin Hohlweg says of Ioannes Aktouarios that "he collected the drugs from different books (of other authors)", but also "from his own experience (*peira*) when they were nowhere written down". He adds that Ioannes listed drugs of his devising "according to the medical mode of enquiry (*iatriké methodos*)", tested and recommended. He concludes that "it is the incentive for one who has studied the subject to arrive at new and better remedies".[40] Aristotelis Eftychiadis, in his summary of changes in drug therapy in Byzantium, identifies these new forms of preparations, substances and uses; he quotes Aetius on the modification of the composition of traditional preparations.[41] New substances came mainly from the East and later occur extensively in the thirteenth-century *Dynameron* of Nicholas Myrepsos. They are also apparent in the remedy text of Constantine Melitiniotes and in texts *Xenonika I* and *II*.

The efficacy of a remedy is vouched for in marginal notes by an owner of the *Vaticanus graecus* 282 already mentioned, who glosses a recipe, "I tested it and it

worked wonderfully well".[42] There is, too, in the narrative of the twelve-century Byzantine historian Ioannes Kinnamos, an allusion to Emperor Manuel I Komnenos (emp. 1143–1180), who developed new drugs that he, Kinnamos, assumed would be introduced into the *xenônes*.[43] But to arrive at new and better remedies is of limited use unless they are given a wide circulation, a restricted prospect in late medieval times, not only because of the laborious nature of copying and circulating texts, but also because there were probably few communities – and these almost certainly urban – where contact between physicians was likely.

The search for new ingredients with powers of healing has always been a desideratum among physicians; Galen himself was assiduous in his search.[44] Evidence of pharmacotherapeutic advance is, however, almost impossible to find unless it is in small measure to be observed in letters, preserved in codex *Vaticanus graecus* 299, exchanged between physicians practising at the Mangana *xenôn* and elsewhere.[45] Some of these letters set out recipes for remedies, others descriptions of treatment; they are not unlike the exchange of information in today's learned medical journals. Yet the scope for improvement in those centuries seems, to the contemporary eye, limited when the rationale for almost any compound from the manuscript is based on theoretical principles that modern medicine does not recognise.

Magic

Subjoined with spiritual ministrations is a belief in *magic* (as it might now be viewed). The extent of its use is unclear, but its presence emerges occasionally from remedy texts. The sixth-century physician Alexander of Tralles prescribed amulets when medicine could help no longer.[46] The *collectanea* of remedies in codex *Vaticanus graecus* 299 contains prescriptions for charms to be written on paper or a leaf and applied to the site of the ailment such as "write upon the liver *Aboubath*, *Boubarith*," for example.[47] In another instance, one of two remedies for sleeplessness[48] requires an invocation to the Mother of God to be written on a bay leaf and placed on the forehead of the patient: "In the name of the Mother of God that bore our Lord Jesus Christ, let all nature be still: and thou, (name), servant of God, be still". These are examples, in Paul Keyser's words in a similar context, of "a cognitive dissonance in studying early medical practices",[49] an assertion that, for the contemporary reader, the presence of invocations would be neither acceptable nor intelligible in a medical book. They recall, nonetheless, the General Epistle of James that says ". . . the prayer of faith shall save the sick".[50] There are no references to the sacred in the *xenôn* remedy texts save for the occasional ingredient; the holy oils of St. Zenäis is an example in the *Therapeutikai*,[51] or the *Salt* (*Alatium*) attributed to St. Luke, St. John or some other saint that is commonly recorded in numerous other remedy texts including the *Therapeutikai*.[52]

Compiling

The great German scholar Ioannes Albert Fabricius (1668–1736) cites some 160 writers on whom Nicholas Myrepsos drew in the compilation of his *Dynameron*

from sources that range from his own day, the thirteenth century, to as far back as the time of the Hippocratic corpus.[53] A calculation suggests that at least sixteen centuries of recorded remedies are represented in his work. The corpus of all extant Greek and Byzantine remedies, stripped of reiteration, would then stand as a monument to the endless search for the means of treating disease in this part of the Mediterranean world.

Of two of the medical writers of the Late Byzantine Period whose texts record drug remedies, Nicholas Myrepsos and Ioannes Aktouarios, as also of their predecessors, Theophanes Chrysobalantes and Ioannes Archiatros, it may be said that each writes for reference and use. Their extant texts, all subject to the fortunes of transmission, display differing structures, so implying different uses and users. Such a wealth of material (including in all probability works no longer extant) is potentially a source for *xenôn* texts for which the compiler may have other criteria than those of a practitioner. One may have an academic bent; another, a practical and more utilitarian approach.[54] Their approaches, taking account of the intended purpose and function of each, are varied, not least in structure or lack of it. Structure is evident in the *Epitome de curatione morborum* of Theophanes and in Books V and VI of the *De methodo medendi* of Ioannes Aktouarios. The text of Nicholas Myrepsos, the *Prostagai* and the *Therapeutikai* are semi-structured, and the *Xenonika I* and *Xenonika II* are barely structured; the third book of the Pseudo-Galenic *Euporista* is to all appearances wholly unstructured.

The wealth of sources is well illustrated in an excerpt from a short remedy text in codex *Vaticanus graecus* 282, ff. 433r–437r.[55] The manuscript comes from the early fifteenth century, and the text is probably contemporaneous, for the compiler seems to have practised in an Aegean island at the end of the fourteenth or beginning of the fifteenth century. He first records remedies of a number of writers and then notes at 437r:[56]

> A pill for bleeding gums; we have tried this (pill) that we got out of Latin and Greek books. . . . In my opinion, the physicians on Lesbos, Chios and at Euripus found it excellent; it is the best possible remedy for the teeth; they use it, praising it highly . . .
>
> Remedy for those unable to have intercourse; it too has been tried by us (similarly gathered from Latin and Greek books). It seemed quite the best to the physicians from the islands mentioned above who (at first taking account of what they probably saw as our poor capabilities), did not believe it had been collected by us . . .
>
> A remarkable blood-staunching tablet which we really collected. In fact, we had the original remedy (τὰς ἀφορμάς) from a certain physician of the Latins.

There is self-advertisement in these introductory observations on each remedy, but also a portrayal of the acquisition and dissemination of remedies. The availability of the Latin and Greek books to the writer endorses the worth of the remedies, the praise of fellow physicians a measure of confidence in the remedy, their testing a mark of their safety; the whole exudes confidence, an essential of good medicine.

The vagaries of transmission, however, result in alteration, loss of context by intention or through lack of care and in ignorance; the integration of other remedies by copyists is a recognised distortion.[57] Consequently there is no firm foundation for drug lore save that of *contraria contrariis* of humoral medicine (and *what works*). Yet not all remedies were ineffectual. Scarborough's demonstration of the potential efficacy of the quinsy remedy of first-century physician Scribonius Largus is matched by Riddle's demonstration of the utility of ingredients commonly found in remedies for *diabetes* (as then understood).[58] Similar instances may well be demonstrable; what counts as an effectual remedy is inherent in a physician's experience and observation. In earlier centuries medical knowledge was often transmitted in families from father to son, thus consolidating practices good and bad.

Experience and observation are similarly, in the compilation of remedy texts, a foundation for effective selection of remedies from available sources. Precedence may rest with the writings attributed to Hippocrates and those of Galen, or the medicinal powers of individual plants, animals and minerals described by Dioscorides, but the remedy that was generally effective probably was favoured, to which it is sensible to add "more often than not". In contrast to modern medicine in which therapy rests on the definition of a specific cause for a disease, Byzantine drug therapy treated the presenting symptom more often than the disease itself; the relief of a symptom may in turn contribute to a potential cure (it is in this light that prognosis was of such importance in Byzantine medicine).

Relief may also lie in spiritual means. Peregrine Horden proposes that medieval hospital healing needed not necessarily the presence of a physician but rather that of *Christ the Physician* through the medium of comfort and hope, and, if needs be, spiritual preparation.[59]

In tandem, both approaches share the less tangible effects of the placebo effect and the *vis medicatrix naturae*. The texts as reference texts ordinarily did not need to take account of this aspect, even where there was a sense, in the words of Faith Wallis, that "physicians were at best the agents of God, the true healer".[60]

The forms of the texts

The texts themselves present a number of difficulties to any attempt to describe their general form, not least a fluidity that is reflected in the omissions, additions and lexical heterogeneity in their manuscripts. Faith Wallis observes that uncanonised medical compilations (that is, compilations from different sources rather than from an individual writer) are usually assembled "*ad hoc* by the compiler of the volume"; she calls them *florilegia* or anthologies and adds, quoting from the theologian and historian of Christianity Jaroslav Pelikan (1923–2006), that it is in the arrangement of the excerpts, irrespective of their sources, that "the meaning of the document lies".[61] The medical contents of codices containing other material (theological or astrological, for instance) offer a challenge to Pelikan's dictum. Codices of this kind sometimes contain predominantly medical compilations with, say, theological texts and other less easily definable lists and treatises. Others

are predominantly theological – for example, the codex *Vindobonensis theologicus graecus* 231 – or contain astrological material as with the codex *Scorialensis* Y.III.14.[62] Faith Wallis, in making her own comment on Pelikan's analogy, is clear that "the process of selection and ordering is not mechanical or random; choice and arrangement almost invariably mean something."[63] But meaning needs to be related to the purpose of the compilation. The combination of one or more of the three books of Theophanes Chrysobalantes with the *Therapeutikai* text is a *cluster*. Its relative frequency in the manuscripts gives it quasi-canonic status, though its origins were more likely to have originated in the chances of textual transmission than in teaching.

Transmission over several centuries often provides a glimpse, if not of changing medical practice in *xenônes*, then of changes to the ingredients of a remedy. This is most clearly seen in the *Prostagai* group of texts. Yet the extant manuscripts of the *Therapeutikai* show little evidence of change to what may be its oldest extant text (perhaps codex *Parisinus graecus* 2229). The *xenôn* remedy texts are not literary works but quasi-text works that distil the bedside practice of medicine.

The texts were simply means of communication, and three forms – that of the manuscripts, that of the texts and that of their contents, proposes Wallis – are the sole criteria for assessing them.[64]

The first of Faith Wallis' forms, that of the manuscripts, is examined in each subsequent chapter. The vagaries of transmission have not affected too much the copies of the *Therapeutikai*. Not unexpectedly, the *Therapeutikai* (and the *Prostagai*, as is similarly demonstrable) were reproduced in compilations of medical texts, with the exception of codex *Monacensis graecus* 105, which is principally astrological in content, and also codex *Florentinus Laurentianus* 7, 19, almost half of whose contents include sacred texts and commentaries. All have fidelity to some notional archetype, to the extent that even a theoretical stemma is difficult to devise.

Fluidity and the lack of archetypes are a barrier to editing the *xenôn* remedy texts in the conventional sense. It is quite possible to build up a composite text from the available manuscripts, but it is then no more than a reconstruction. Only a literary work lends itself to a search for a text as close as possible to the archetype.[65]

The utility of the *Therapeutikai* is expressed in the number of known copies. For example, a codex currently identified as Iviron 151 that was the property of the Iviron monastery on Mount Athos was almost certainly copied or even compiled there for use in that community.[66] Numerous copies imply utility by means of direct use at the bedside, in the pharmacy.

Notes

1 Touwaide 1992: 78–79.
2 This number corresponds to the current state of research. New manuscripts may come to light in the future, particularly as a result of the compilation of a new census of Greek medical manuscripts by Alain Touwaide (see Touwaide 1991a, 1992, 2008a and 2009a).
3 Daremberg 1853: 22–31.
4 Jeanselme 1930: 147–170. Of interest also Jeanselme and Oeconomos 1921 and 1925.

5 *Ibid.*: 169.
6 Kousis 1928: 77–90.
7 Ieraci Bio 1996: 191–205; and Criscuolo 1996: 113–31, respectively.
8 Miller 1985: xi.
9 Wallis 1995: 105.
10 In the Arabo-Islamic world there are examples of hospital (*bimaristan*) pharmacopoeias suggesting texts similar to those of the Byzantine world. See for example Sbath 1933 and Meyerhof 1948.
11 Kazhdan and Epstein 1985: 155–156. See also Grumel 1949 and Kazhdan 1984.
12 See Karas 1994: 177, 196 and 205 for examples.
13 See Zipser 2009: 14–27.
14 See Karas 1994: 161, 163, 167, 174, 193, and 197 for instance.
15 This loss is not necessarily the same as mutability of contents by scribal alterations during transmission.
16 Kousis 1928: 78.
17 See the manuscript *Florentinus Laurentianus* 7, 19, item no. 26 in Bandini 1764–70: 1.262–266, especially 265 (where this item is numbered XXVII instead of XXVI): "Medicamina composita a variis medicis secundum rationem Zenonis". More recently, see Horden 2013: 151.
18 Zipser 2009: 9.
19 See Lloyd 2003: 122.
20 κουβουκλήσιος (*koubouklêsios*), an ecclesiastical office; πρωτομενυτής (*protomenutês*), perhaps a senior physician. See du Cange 1688: 725, *sub verbo*, and *Addenda in glossario mediae et infimae graecitatis/Appendix ad glossarium*, 111, *sub verbo* κουβουκλήσιος, and 1266, *sub verbo* πρωτομενυτής. More recently, Kazhdan et al. 1991: 2.1155, *sub verbo koubouklеisios* (A. Kazhdan), and Criscuolo 1996: 113–114 on both titles.
21 Lit. "on the road".
22 See Liddell et al.1996: 1835, *sub verbo τύπος*, VII.3.
23 Although there can be no certainty, it seems more likely that the *imperial* reference is to the *Basilikos xenôn* rather than the imperial household. This *xenôn* existed in the twelfth century, a period that is compatible with the period of activity of the Mangana *xenôn*.
24 Chapter 68 (περὶ τοῦ μεγάλου ἀποζέματος τοῦ ξενῶνος) contained in Iviron 151 and *Parisinus graecus* 2236.
25 In support of these examples is the brief record in the medical compilation in codex *Vaticanus graecus* 299, f. 422v, ll. 15–29, which reads (ll. 15–16): "A remedy for an inflamed hand following phlebotomy, as we were taught in the *xenôn*".
26 There are often to be found at the end of this text various "add-on" remedies that do not fit into the *a capite ad calcem* order of the major part; these are likely to be attributable to later writers.
27 Wallis 1995, *passim*.
28 Stannard 1984: 205.
29 *Corpus Hippocraticum*, *De morbo sacro*, 18 (ed. and Fr. tr. Littré 1839–61: 6.394–396; ed. and Engl. tr. Jones 1923: 182–183 [where this paragraph is numbered XXI]). See also Stannard 1961.
30 Siraisi 1990: 146.
31 For these texts, see Karas 1994.
32 See Devreesse 1954: 50 and footnotes.
33 Thomas 1987: 244–69; and Miller 1997: 190–206.
34 See Trapp et al. 1976–96.
35 *Vaticanus graecus* 299, f. 374r, l. 22.
36 For an Arabic source, see, for example, the recipe of f. 435r, ll. 12–18 (ζουλάπιον λίθων θρυπτικὸν τοῦ ἀβιτζιάνου); for the Taronitae, f. 434v, ll. 8–14 (ἀντίδοτος λιθῶν θρυπτικὸν καὶ διουρητικὸν τοῦ ταρονίτου); for Benjamin, see the collection of

medicines starting at f. 437v, l. 27 (ἕτεραι σκευασίαι κοκκίων ζουλαπίων ἐμπλάστρων συντεθεῖσαι εἰς τὴν ἑλλάδα παρὰ ἰουδαίου βενιαμίν). On these physicians, see Diels 1906: 22, *sub nomine* Benjamin. References to works by Abraham (codices Escorial Ω.1.8. [on which see De Andrés 1967: 126–128] and Florence *Laurentianus* Antinori 101) can be found in Diels 1906, 3, *sub nomine*, and Isaac the Israelite (codex *Vaticanus graecus* 300, f. 296r) in Mercati and Franchi de' Cavalieri 1923: 434. The bibliography on the Vatican manuscript *graecus* 300 (of Southern Italian origin) is abundant. Besides Mercati and Franchi de' Cavalieri 1923: 430–437, see, for example, Ieraci Bio 1989: 179, 194, 199, 204–206, 210, 213, 221–223, 223–228, 237.

37 Riddle 1974: 171–175; and Touwaide 1993: 359–361 (Engl. tr. 1998: 267–269).
38 On this question, see Fabricius 1972.
39 For Theophanes Chrysobalantes' sources, see the *apparatus fontium* in the edition by Bernard 1794.
40 Hohlweg 1984: 132.
41 Eftychiadis 1983b: 257–258, especially 258 (d) in respect of the modification of preparations.
42 Codex *Vaticanus graecus* 282, ff. 254v and 363v.
43 *Cinnamus*, *Historiae*, IV.21 (ed. Meineke 1836: 190, ll. 14–17): "ἤδη δὲ καὶ πολλὰ τῶν Ἀσκληπιαδῶν συνεισενεγκάμενον ἐπιστήμη, ἅπερ ἄγνωστα ταύτῃ τοῦ παντὸς ἔμεινεν αἰῶνος, τῶν ὅσα ἐπιχρίεσθαι πέφυκε καὶ ὅσα ποτά, ἃ καὶ ἔξεστι τῷ γε βουλομένῳ ἐκ τῶν κοινῶν ἀναλέγεσθαι νοσοκομείων, ἃ ξενῶνας καλεῖσθαι ἔθος ἐστίν".
44 See Nutton 2004: 245.
45 *Vaticanus graecus* 299, f. 344v, l. 13–345, l. 12, and f. 368v, ll. 7–29.
46 *Alexander Trallianus*, *Therapeutica*, 7.9 and 11.1 (ed. and tr. Puschmann 1878–9: 2.319, ll. 4–28, and 474–475, ll. 4–24; French translation in Brunet 1933–37: 4.35–36 and 169–170, respectively).
47 *Vaticanus graecus* 299, f. 373r, l. 11.
48 *Ibid.* f. 278v, ll. 2–3.
49 Keyser 1997: 175.
50 St. James, *Epistle*, 5.15.
51 *Therapeutikai*, chapter 38.
52 *Lucas*, *Alatium*, ed. Ideler 1841–42: 1.297. For the *Therapeutikai*, see chapter 67.
53 Fabricius 1708–28: 13.9–15.
54 See McCabe 2007: 69.
55 For a description of this text, see Mercati and Franchi de' Cavalieri 1923: 389–390. Whereas the first recipe is rightly attributed to Ioannes Staphicaces (under the title *De nonnullorum medicamentorum compositione*) in the catalogue of Greek medical manuscripts of Diels 1906: 55, the whole text of ff. 433r–444v is attributed to Staphidaces by the German philologist and historian of Greek medicine Max Wellman (1863–1933) in the 1908 supplement to this catalogue (Diels 1908: 55) as Mercati and Franchi de' Cavalieri 1923: 389, already noticed.
56 The Greek text of this note is reproduced in Mercati and Franchi de' Cavalieri 1923: 390.
57 Gamillscheg 1999: 478.
58 Scarborough 2005: n25, translating *Scribonius Largus*, *Compositiones*, 70 (ed. Sconocchia 1983: 39), and Riddle 2007: 12–13.
59 Horden 2007a: 133–137 principally.
60 Wallis 1995: 119.
61 Pelikan 1984: 74; and Wallis 1995: 105.
62 On the *Vindobonensis*, see Hunger et al. 1992: 105–110, especially 108; and on the *Scorialensis*, see Zuretti 1932: 38–41; and De Andrés 1965: 161–164.
63 Wallis 1995: 105.
64 Wallis 1995: 104.
65 Maas 1957/1958: 1.
66 On this manuscript, see Lampros 1895–1900: 2.34–35.

Part II

Exploring the textual evidence

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4 "In conformity with *xenôn* practice"

The *Therapeutikai*

> Keep well in your memory drugs and their properties. . . .
> This in medicine is beginning, middle and end.
>
> *Hippocratic Corpus*, *Decorum*, 9

This aphorism bears recall when, in the age of modern medicine, *xenôn* remedy texts still repay study. The θεραπευτικαὶ ἰατρεῖαι (*Therapeutikai iatreiai*, *Medicinales curae*, *Medical treatments*), identified as *Therapeutikai* in an abbreviated form in this study, may be the earliest extant *xenôn* remedy text. Its title reads:

> Θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος.
>
> Therapeutic medical treatments recorded by various physicians in conformity with the *xenôn*'s precept of practice.

We do not know the name of the *xenôn*, and no reference is made to *xenôn* practice except in this heading.

The English rendering here of the Greek errs on the side of too free a translation but seeks to convey the sense of the heading to one of the few extant *xenôn* remedy texts. But what are the precepts of pharmaceutical practice at a *xenôn* in an age of herbal medicine? The presumption might be the presence of competent pharmacists, availability of herbal ingredients that are fresh or dried as practice requires, and proficiency in preparing remedies to accord with the patient's individual needs. To these we might add knowledge of medical botany and comprehension of humoral practice and herbal lore. The task of this and subsequent chapters is to study each extant text for what it has to say of theoretical and practical aspects of Byzantine pharmacy. In so doing, we need to avoid the dangers of historical positivism and in the words of John Riddle ". . . evaluate the past on the basis of what modern science and cultural values regard as truth."[1]

A utilitarian text

The *Therapeutikai* is a relatively short text of sixty-seven chapters in its fullest version. It lacks a *pinax* or index. The earliest extant manuscript is assigned to the

Table 4.1 Manuscripts of the *Therapeutikai*[2]

Groups	*Manuscripts*	*Century*	*Sigla*
1	El Escorial, Biblioteca del Monasterio, E.IV.16	*antiquus*[3]	S
	Florence, Biblioteca Medicea Laurenziana, plut. 7, 19	14	L
	Munich, Bayerische Staatsbibliothek, *graecus* 105	16	M
	Paris, Bibliothèque nationale de France, *graecus* 2194	15	P5
	Vienna, Österreichische Nationalbibliothek, *medicus graecus* 32	16	V
2	Athens, National Library, 1499	16	A
	Paris, Bibliothèque nationale de France, *graecus* 2091	15	P3
	Paris, Bibliothèque nationale de France, *supplementum graecum* 764	14	P2
3	Athos (Mount-), Iviron, 151	15	Ib
	Paris, Bibliothèque nationale de France, *graecus* 2236	15	P4
4	Oxford, Bodleian Library, *Baroccianus* 150	15	O
5	Paris, Bibliothèque nationale de France, *graecus* 2229	13	P1

thirteenth century and the latest to the sixteenth (see Table 4.1). Remedy texts of its kind, utilitarian as distinct from the didactic pharmacotherapeutic works of, say, Galen, are relatively common in the medical manuscripts of the late Byzantine centuries, but few are recorded as *xenôn* texts.

A remedy text is generally a listing of ingredients for specific affections with brief directions for their preparation. The *Therapeutikai* assert in their title that their remedies have been "recorded by various physicians" for use in a *xenôn* that is not named. Its contents include up to five alternative remedies for most affections listed. By later medieval times, the repertory of remedies in popular medical texts that have survived the centuries, East and West, was so extensive that for institutional use there was collectively an extensive pharmacopeia. Compare the hospital of Santa Maria Nuova in Florence that in its 1515 notebook recorded many hundreds of "tried and tested" remedies.[4] We cannot know their efficacy, although some ingredients prompt recognition of their healing powers. Similar dispensatories were to come into general use in the Arabo-Islamic World and the West. In the late thirteenth century in Byzantium, Nicholas Myrepsos compiled his *Dynameron*, drawing principally on Greek medical writers at least as far back as Galen, as well as on the Western and Arabo-Islamic corpus. In the West, Rufinus (thirteenth century) compiled his extensive *De virtutibus herbarum*,[5] drawing on Dioscorides,[6] the *Circa instans* ascribed to the otherwise unidentifiable Matthaeus Platearius (twelfth century),[7] the so-called Macer Floridus (i.e. Odon de Meung [eleventh century]),[8] Alexander the philosopher,[9] *De diaetis particularibus* of Isaac Judaeus (d. ca. 932)[10] and some lesser authorities. The *Antidotarium* of Nicolaus Salernitatus (fl. ca. 1150)[11] provides a link between East and West at this time through his work's

influence on Nicholas Myrepsos' *Dynameron*. In contrast, the *Therapeutikai* text is both limited and brief.

Transmission

The *Therapeutikai* has survived in eleven manuscripts, almost certainly because of its contiguity with one of the three works of Theophanes Chrysobalantes (*De curatione morborum*) in each manuscript.[12] One other *antiquus* copy on parchment is known to have been recorded at El Escorial before the partial library's destruction by fire in 1671.[13] The association of the *Therapeutikai* and Theophanes Chrysobalantes in the manuscripts misled some earlier scholars to assume a common authorship of Theophanes' works and the *Therapeutikai*, despite the absence of the *Therapeutikai* from the many other manuscripts containing, in whole or part, Theophanes' works.[14] How the conjunction of the two texts came about is a matter for speculation. We conjecture, for example, that the *Therapeutikai* was a physician's record of the remedies he used in a *xenôn*, set down in that *xenôn*'s copy of the works of Theophanes Chrysobalantes, and so copied on, thus ensuring the text's subsequent transmission in copies from that source.[15]

In two manuscripts, Venice, Bibliotheca Nazionale Marciana, *appendix graeca* XI, 21 (coll. 453) (fourteenth century) and London, British Library Add. 5119 (fifteenth century), texts occur whose titles resemble that of the *Therapeutikai*, though differing extensively in content.[16] This suggests that the source of the first and some subsequent remedies was either the *Therapeutikai*, or some lost remedy text that was in common use. The *Therapeutics* of Ioannes Archiatros, a text with a *terminus post quem* possibly of the early to mid-thirteenth century,[17] similarly borrows some thirteen remedies.

There remains the briefest glimpse of the *Therapeutikai* in the codex of Paris, Bibliothèque nationale de France, *graecus* 2194, a manuscript that we shall turn to in a discussion of the texts here designated as *Xenonika I* and *Xenonika II*. It is a curious manuscript, for the bulk of it contains in over four hundred folios Books V to XIV of Aetius of Amida. The remaining sixty-four folios are made up of nine shorter works, amongst which is Theophanes' *De remediis*. In this *Parisinus*, the last chapter of Theophanes' text is followed without a break by the opening words of the chapter XX of the *Therapeutikai* that abruptly ends and is followed by a collection of remedies (ff. 432r–441r) and, then, the *Xenonika I* and *II*.

The *Therapeutikai* can be found in the eleven manuscripts listed in Table 4.1 together with the one now lost.

Stemma

The presence or absence of chapter numeration in medical texts is sometimes a useful guide to the formulation of a stemma.[18] Numeration of chapters occurs in the manuscripts of Athens, National Library, 1499 (= A), and Paris, Bibliothèque nationale de France, *supplementum graecum* 764 (= P2).

As for family relationships, two are immediately detectable, notably (1) Florence, *Laurentianus* 7, 19 (L), Vienna, *medicus graecus* 32 (V) and Munich, *graecus* 105 (M); (2) Paris, *supplementum graecum*, 764 (P2), Paris, *graecus* 2091 (P3) and Athens, National Library, 1499 (A). Two other manuscripts, Athos, Iviron, 151 (Ib) and Paris, *graecus* 2236 (P4), appear to have a common source by virtue of three recipes at their close that are not present in the other manuscripts. Of the remaining codices, Paris, *graecus* 2229 (P1) and Oxford, *Baroccianus* 150 (O), each stands alone, P1 omitting the majority of the chapters from chapter 49 onwards. The remaining manuscripts, *Scorialensis* E.IV.16 (S) and Paris, *graecus* 2194 (P5) probably fall within Group 1. Symeon Seth's *De alimentorum facultatibus*[19] is present in the codices Athens, 1499 (A), Florence 7, 19 (L), Paris, *graecus* 2229 (P1), Paris, *supplementum graecum*, 764 (P2), Munich 105 (M) and *Scorialensis* E.IV.16 (S).

In ephemeral and anonymous medical texts fluidity characterises the transmission.[20] The *Therapeutikai* bear witness to this fluidity although they retain their essential form and content in all but one of the extant manuscripts (Paris, *graecus* 2229 [P1]).

Because the *Therapeutikai* occur with much the same texts in the manuscripts listed in the Table 4.1, the determination of family groups relies on the variations in the association with – and sequence of – other texts in each manuscript, here, as we have noted above, the three works of Theophanes Chrysobalantes. These associations and sequences give some seven combinations (see Table 4.2).

Table 4.2 Sequence of Theophanes Chrysobalantes' works and *Therapeutikai* in the manuscripts

Manuscripts	*Sequence of texts*				
Athens, EBE, 1499	C	R	*Th.*	G	A
Athos, Iviron, 151	C		*Th.*		
Florence, BML, plut. 7, 19	C	R	*Th.*	G	A
Munich, BSB, *gr.* 105	C	R	*Th.*	G	A
Oxford, Bodl., *Barrocc.* 150	A		*Th.*	G	R
Paris, BnF, *gr.* 2091	C	R	*Th.*	G	A
Paris, BnF, *gr.* 2194		R	[*Th.*]		
Paris, BnF, *gr.* 2229		C	*Th.?*	A	R
Paris, BnF, *gr.* 2236			*Th.*	G	C
Paris, BnF, *suppl. gr.* 764	C	R	*Th.*	G	A
Vienna, ÖNB, *med. gr.* 32	C	R	*al.*	A (pt.)	*Th.*

A = Symeon Seth, *De alimentis*.
al. = *aliud*.
C = Theophanes Chrysobalantes, *Epitome de curatione morborum*.
G = St. Gregory, *Salt*.
R = Theophanes Chrysobalantes, *Synopsis de remediis*.
Th. = *Therapeutikai*.

The chief association of Theophranes Chrystobalantes' works with the *Therapeutikai* is the following sequence:

- Theophanes Chrysobalantes, *De curatione morborum* (= C);
- Theophanes Chrysobalantes, *De remediis* (= R);
- *Therapeutikai;*
- Symeon Seth, *De alimentis* (= A).

This group comprises the following five manuscripts:

- Florence, 7, 19 (L);
- Munich, *graecus* 105 (M);
- Paris, *supplementum graecum*, 764 (P2);
- Paris, *graecus* 2091 (P3);
- Athens, 1499 (A).

The *Scorialensis* E.IV.16 (S) may on the evidence of the surviving catalogue belong to the same group.

Of the two earliest extant manuscripts within this grouping, Florence, 7, 19 (L) and Paris, *supplementum graecum*, 764 (P2), L may be the earliest.

Closely linked is the sixteenth-century manuscript Vienna, *medicus graecus* 32, where we have the following sequence of texts:

- Theophanes Chrysobalantes, *De curatione morborum* (= C);
- Theophanes Chrysobalantes, *De remediis* (= R);
- Symeon Seth, *De alimentis* (= A);
- *aliud*;[21]
- *Therapeutikai*.

On examination it is apparent that this manuscript is very close to the tradition of Florence, *Laurentianus* 7, 19 (L) and Munich, *graecus* 105 (M). Joseph Sonderkamp corroborates this in his study of detectable family groups in manuscripts of Theophanes Chrysobalantes.[22]

The prospective group 2 comprises the following three manuscripts:

- Paris, *supplementum graecum*, 764 (P2);
- Paris, *graecus* 2091 (P3);
- Athens 1499 (A).

It is not, however, reconcilable as a coherent group. Study of the variants shows the closest affinities between P2 and P3, but A is of poor quality and may reasonably be discounted as a major contributor to a sound text.

There remains a prospective group with the two manuscripts Athos, Iviron, 151 (Ib) and Paris, *graecus* 2236 (P4), not of direct descent one from the other, but from an intermediate codex, most probably codex Paris, *supplementum graecum*, 764 (P2).

The remaining two manuscripts, Paris, *graecus* 2229 (P1) and Oxford, *Baroccianus* 150 (O), contain a collection of short items of which the *Therapeutikai* is one. Their text is closest to Paris, *supplementum graecum*, 764 (P2) and Paris, *graecus* 2236 (P3) in the following sequence of works:

- Symeon Seth, *De alimentis* (= A);
- *Therapeutikai*;
- Theophanes Chrysobalantes, *De remediis* (= R).

Codex Paris, *graecus* 2229 (P1) is difficult to assess, missing many chapters, not least the final ten of the *Therapeutikai*. It falls within the following group of texts:

- Theophanes Chrysobalantes, *De curatione morborum* (= C);
- the *Therapeutikai*;
- *aliud*;
- Theophanes Chrysobalantes, *De remediis* (= R).

A detailed table of contents of the *Therapeutikai* is provided in Table 4.4. A critical edition of the text should probably be based on the manuscripts Paris, *supplementum graecum*, 764 (P2), Paris, *graecus* 2091 (P3), Florence 7, 19 (L), Munich, *graecus* 105 (M), and to a certain extent Athos, Iviron, 151 (Ib) and Paris, *graecus* 2236 (P4). The codex Oxford, *Baroccianus* 150 (O) provides a valuable adjunct. Of the first four, the *Laurentianus* and the *Parisinus, supplementum graecum*, 764 are the earliest (fourteenth century), this period also being that to which the majority of the manuscripts of Theophanes are attributable.[23]

It does not follow that the *Therapeutikai* was compiled in the fourteenth century. With other remedy texts, it shares both the initial chapter πρὸς ὄξυν πόνον τῆς κεπηαλῆς (*pros oxun ponon tês kefalês*) and some other remedies occurring in two codices, Venice, Biblioteca Nazionale Marciana, *appendix graeca* XI, 21 (coll. 453) and London British Library, Add. 5119. This first chapter, and some fourteen others,[24] also occur in the codices containing the *Therapeutics* of Ioannes Archiatros. Although the *Therapeutikai* are silent on this first chapter's sources, there is a comparable remedy in the pseudo-Galenic *Euporista* III of unknown but probably late date.[25] Three further instances occur in the medical collection in the late fourteenth-century codex *Vaticanus graecus* 299.[26] The pursuit of sources is not, however, necessarily rewarding except in instances where the resolution is germane to the discussion of, for example, the date of compilation of the text. Such evidence as there is suggests this was probably during a period ca. 1050. The argument for this tentative conclusion rests in part on the following considerations arising from Gennadii Litavrin's observation about the compilation of the medical portion of codex *Florentinus Laurentianus* 7, 19:[27]

> . . . me semble avoir comme terminus post quem la deuxième moitié du XI^{e} siècle, on vient de le dire: on mentionne dans le texte la basilissa Zoé, morte en 1050, et les oeuvres de Syméon Seth.

This Florentine manuscript was copied at some time between the thirteenth and fourteenth centuries, as were most of the manuscripts that contain the *Therapeutikai*. It too contains the *Therapeutikai*, but no medical writers later than Theophanes Chrysobalantes (fl. mid-tenth century) or Seth (fl. second half of the eleventh century) and therefore originates no earlier than Seth's *floruit*. The *Therapeutikai* are a compilation from sources as early as Galen, but one in which no latest source is identifiable.[28]

In summary, there is no clear evidence that points to the *Therapeutikai*'s date of compilation. Litavrin's observation serves to place it in a broad time period; arguably, the simple remedies of relatively few ingredients put their compilation before 1204, a period when *xenônes* appear to have been particularly active. The language of the text is valueless as an aid to dating, the *xenôn* of the title is unknown, and their remedies almost certainly are a collection from a variety of sources. The period 1050–1150 suggests itself.

More significant, however, is a manuscript of the fourteenth century, London, British Library, Add. 5119, that has the title θεραπευτικαὶ ἰατρικαὶ συντεθῆσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἔκθεσιν τοῦ ξενῶνος (*Medical remedies compiled by various physicians according to the hospital's procedures*).[29] This and the first chapter are common to the *Therapeutikai*. It has a few other common chapters whose order, however, does not match that of their counterparts in the *Therapeutikai* (see Table 4.3). The form of the title is, however, close to that of

Table 4.3 Comparison of the order of chapters in the *Therapeutikai* and other texts

	Ven., Marc. app. *gr. XI, 21*	*London, BL, Add. 5119*	*Therapeutikai*	*Io. Archiatros (Munich, BSB,* gr. *288)*
1	εἰς ὀξὺν πόνον κεφαλῆς	πρὸς ὀξὺν πόνον κεφαλῆς	πρὸς ὀξὺν πόνον κεφαλῆς	πρὸς ὀξὺν πόνον κεφαλῆς
2	εἰς ζέσιν κεφαλῆς	πρὸς τράχωμα ὀφθαλμῶν	πρὸς ἡμίκρανον	πρὸς πόνον κεφαλῆς καὶ ἡμικρανίου
3	εἰς σκοτωματικόν	πρὸς κνισμώνην ὀφθαλμῶν	πρὸς πόνον κεφαλῆς καὶ ἡμικρανίου	εἰς ζέσιν κεφαλῆς
4	εἰς αἱμορραγίαν ῥινός	πρὸς ῥευματιζομένους ὀφθαλμούς	εἰς ζέσιν κεφαλῆς	εἰς πόνον ὀφθαλμῶν
5	εἰς πόνον γλώσσης	πρὸς αἱματίδα ἐν ὀφθαλμοῖς	ἀπόζεμα σκοτωματικόν	εἰς κνησμὸν ὀμμάτων
6	κοιλιακά	πρὸς ξηράδα μυκτήρων	κεφαλικὸν περίχυμα	εἰς ῥευματιζομένους ὀφθαλμούς
7	ἡπατικὰ καὶ πλευριτικά	στοματικόν, κτλ.	ὀφθαλμικόν	ὅταν ῥέῃ αἷμα ἀπὸ τὴν μύττην
8	πρὸς δυσουρίας	ἀπόζεμα σκοτωματικόν	εἰς τράχωμα ὀφθαλμῶν	ὅπου πτύῃ αἷμα

(*Continued*)

Table 4.3 (Continued)

	Ven., Marc. app. *gr. XI, 21*	*London, BL, Add. 5119*	*Therapeutikai*	*Io. Archiatros (Munich, BSB,* gr. *288)*
9	σπληνικά	πρὸς ῥεούσας τρίχας	ὅταν κνήθεταί τις τοὺς ὀφθαλμούς	πρὸς πόνον γλώσσης
10	ἰσχιαδικά	περὶ ὀφθαλμῶν	εἰς αἱμορραγίαν ῥώθωνος	πρὸς πόνον ἥπατος
11	εἰς δοθήιναν	εἰς βρωτῆρα στόματος	εἰς ξηράδα ῥώθωνος	ὅταν γένηται ὁ σπλῆν σκληρός
12	εἰς αἱμορραγίαν	πρὸς αἰγίλωπα	στοματικά, κτλ.	πυρία ὅταν ὀδυνῶνται τὰ νεφρά
13	εἰς ποδαλγίαν	περὶ ἐμφράξεως ἥπατος	εἰς βρωτῆρα στόματος	εἰς τὸ ἀναθῆναι σάρκα
14	ἐμετικόν	περὶ σπληνῶν	ὀδοντότριμμα	εἰς ἔμφραξιν ὠτίων
15	πρὸς ἔκβρασιν	εἰς σπλῆνα δόκιμον	πρὸς αἷμα πτύοντα	εἰ πιτυρίδαν κεφαλῆς
16	καθαρτικὰ κοκκία	πρὸς ψώραν	εἰς πόνον γλώσσης	πρὸς ὀδύνην κεφαλῆς

the *Therapeutikai*, suggesting a borrowing and amendment, one way or another, of the title and *incipit*. It follows, therefore, that either the *Therapeutikai* or the *Londinensis* Add. 5119 text represent the original *xenôn* text.

Any argument for a later date for the *Therapeutikai* would need to respond to the turmoil of the Latin occupation of Constantinople from 1204 until 1261, and its aftermath. The fate of the *xenônes* in Constantinople during and after the occupation is uncertain, despite references in the sources to eight *xenônes* that with some certainty existed in the city up to the thirteenth century (see Table 1.2). Each of the eight is potentially a source of the *Therapeutikai* if the *xenôn*'s size (and "patient-throughput") justified the compilation of a remedy list.

Structure of the *Therapeutikai*

The form of an archetype of the *Therapeutikai* is bound up in its structure. The text uses, for the first two thirds of its contents (chapters 1–46), the format *a capite ad calcem*; the remaining third (chapters 47–67 or 70 according to the manuscripts) is composed of a varied collection of remedies, without recognisable order, and suggestive of random additions.

The last chapter in all but two manuscripts (Athos Iviron 151 and Paris *graecus* 2229) is St. Gregory's *Salt* (*Alatium*) (chapter 67).[30] It is undoubtedly a late addition, as are the three chapters (68–70) that follow in the manuscripts Iviron 151 and Paris, *graecus* 2236. The manuscript of Paris, *graecus* 2229 ends at chapter 57 and continues without a break with remedies from Theophanes' *De curatione morborum*.

A comparison of each manuscript containing the text shows both consistency and fidelity in its ordering with no exceptional variants.

The form in which the text has been transmitted over three centuries is either that of the quasi-archetype with minor additions or a variant of an archetype that concluded with the chapters in the *a capite ad calcem* format.

The chapters that follow fall into groups of topics that together are largely unstructured. The structured remedies are of the kind that are apt to institutional use, just as most of the remaining twenty chapters are useful for a number of common conditions that might present at an urban *xenôn*. At the same time, *pace* the dangers of retrospective diagnosis, most of the chapters appear to reflect the commoner complaints and affections of the late Byzantine centuries. An example is that of affections of the uvula (κιονικὰ ὅταν ἡ σταφυλή, chapter 56), a relatively uncommon condition in modern medical practice,[31] but featuring often in Byzantine sources, both literary and medical.[32] Was there a determinant that predisposed the population to this affection then and in that place?

It should, however, be possible to analyse the headings of remedies to determine the general disease pattern among admissions to a *xenôn* on the premise that the texts are unlikely to include uncommon affections. Treatment of, say, ἐλεφαντίασις (*elephantiasis*) was available in the encyclopaedic works of the earlier medical writers.[33] As we have mentioned, the most prevalent groups of diseases in the urban population were probably gastro-intestinal, followed closely by upper respiratory tract infections, to which should be added localised lesions and infections, dermatological conditions and gynaecological disorders; malaria, too, was endemic.

Title and *incipit*

The presumptive dating of the *Therapeutikai* to the period 1050–1150 provides a perspective for examining the title and *incipit*. The wording of the title (θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος) suggests a *xenôn* with sufficient medical staff including, perhaps, a pharmacist working κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος (*according to the defined procedure of the xenôn*).

The full title, on scrutiny, contains much information in small compass. With the exception of manuscript *Parisinus graecus* 2236 (ff. 54r–60r),[34] it is almost identical in all the manuscripts listed in Table 4.1. It is as elaborate as that of the *Prostagai* (προσταγαὶ καὶ τύποι τῶν μεγάλων ξενώνων, ὅσα ἐκ πείρας ἰατρῶν παῖδες θεραπείας χάριν προσάγουσι · καὶ τοῖς ἄλλοις πῶς πάσχουσιν μάλιστα ἐν τοῖς ξενῶσιν), and a number of terms in it require elucidation. The first of these significant terms, συντεθεῖσαι (*suntetheisai*), is usually taken to mean "collected" or "assembled". It could equally well mean "composed", "devised" or "set in order" in this context and still make sense. It commonly occurs in manuscript titles up to the eighteenth century.[35] This collection of remedies was also "set in order", for that is implicit in the term *ektetheisan* of the second half of the title.

But translation of the title needs care if we are to avoid a stilted phraseology. The principal difficulty is the translation of ἀκολουθία (*akolouthia*), a relatively common word with meanings such as "sequence" in both the early, medieval and current Greek.[36] We shall translate it here as "practice", thus "according to *xenôn* practice", suggesting an organised establishment rather than an *ad hoc* "first aid post". If we translate this title as follows:

> Therapeutic medical treatments recorded by various physicians in conformity with the *xenôn*'s precept of practice

We must ask what is this *practice*? It might appear to be some kind of protocol or rule of good practice. This inevitably is speculative.[37]

Despite these difficulties of interpretation, this is a very specific title for a relatively short text. Does the title belong to the text? Whether the title was present in the original text or is a later addition is unknowable. The anonymity of the *xenôn* is explicable here, perhaps because it was no longer recognisable or meaningful to later copyists after the turmoil of the Latin capture of Constantinople.

A study of Karas' inventory of Late- and Post-Byzantine medical literature and manuscripts shows clearly that Greek medical texts from the Late Byzantine period and after had elaborate titles, some patently spurious and unlikely to have been contemporary with the text.[38] In this context, Jerry Stannard's observation is pertinent: that in Byzantine texts on *materia medica* "a reference to a written source . . . was not the act of historical scholarship that today is associated with a learned footnote".[39] It reflects in part, he says, "the traditionalism inherent in Byzantine medicine." On the balance of probabilities, however, the doubts about authenticity need not prevail.

The contents of the *Therapeutikai*

The *Therapeutikai* are a collection of remedies, some gathered from earlier sources and some probably from nearer to the time of the text's compilation (see Table 4.4 for a list of the chapters). What were the criteria that made them worth recording? Prospective efficacy by experiment (δία πείρας, *dia peiras*) would have been a useful criterion; ease of preparation of remedies and economy in use are appropriate to institutional medical practice. *Xenôn* physicians engaged in public medical practice did not need to impress their patients with expensive and numerous ingredients or depend on a patient's ability to pay.

Most chapter titles are concise, although occasionally they are elaborated. In chapter 54, for example, εἰς τὸ ῥέον ὅπερ τινὲς γλυκύ φασιν (*eis to reon oper tines gluku phasin*, "the flux that some call gluku [sweet]"), the title is descriptive, and concise, though uninformative about the nature of the affection.[40]

Many remedies of the *Therapeutikai* are simples.[41] Sixteen are made of only one ingredient, and thirty-two have only two ingredients, of which one may be the medium for delivery of the active ingredient – that is, the excipient. The rest are compound medicines. There are no remedies assigned the descriptive names

Table 4.4 Table of contents of the *Therapeutikai*

Head
1 For a sharp pain in the head
2 For a pain on one side of the head or face
3 For a pain in the head and half the head
4 For a feverishly hot head
5 Decoction for use in cases of giddiness
6 Head lotion

Eyes
7 An eye remedy
8 For trachoma of an eye
9 For cases of itching affecting the eyes
10 For a discharge from the eyes

Nose
11 For a nosebleed
12 For dryness of the nose

Mouth
13 A mouthwash
14 For ulceration of the mouth
15 Toothpaste
16 For haemoptysis
17 For pain in the tongue

Intestines
18 A laxative epithem
19 Affections of the intestines
20 For induration of the viscera
21 Affections of the liver, and pleurisy
22 For the liver
23 Poultices for sufferers from pleurisy
24 For a liver affection
25 For stomach pain
26 A plaster – strictly an epithem – for stomach pain and every affection arising from there
27 For affections of the spleen
28 An epithem for the spleen
29 About embrocations for the spleen
30 For all internal pain and poisoning
31 Kidney affections
32 A fomentation for kidney affections
33 Diuretics
34 An enema for sciatica

Skin lesions
35 For sores on the privy parts
36 For cases of an external sore on the privy parts
37 For every kind of induration
38 Counter-irritant plasters
39 An ointment for injuries
40 A medicinal ointment
41 For an excrescence of the flesh
42 A method of fomentation of the flesh
43 For a haemorrhage

Feet
44 For swollen feet
45 For gout
46 For a callosity

Fever
47 For shivering fits

Emetics
48 Emetics

Inflammations
49 For external haemorrhoids
50 For buboes and the plague

Purges
51 Galen's purgative pills
52 Purgative for those suffering from the dropsy
53 Prescription for purging of phlegm

Ears
54 For the mucous discharge which some call *gluku*, whatever its origin (mastoiditis)
55 Ear remedies for blockage of the ears

Throat and lungs
56 Affections of the uvula; for cases of the enlargement of the uvula
57 Gargles
58 Cough remedies
59 The Linctus
60 Remedies for shortness of breath

Skin lesion
61 For a suppuration (spreading) from head to hands or feet or any other limb

Digestion
62 A dry powder for the stomach to be taken with wine
63 For those who do not keep down their food
64 A desiccative compound efficacious for a flux from the head

Miscellaneous lesions
65 For a scald from hot water
66 For pruritis

St. Gregory's Salt
67 A salt prepared by St. Gregory

Antidotes
68 On the great decoction of the *xenôn*
69 The great decoction of Athanasios
70 Antidotal drugs

long familiar to Byzantine physicians (for example, *Theriac* or *Philo's antidote*), with the exception of St. Gregory's *Salt* (chapter 67), which appears in many other medical manuscripts.[42]

The practicality of the text lies in the instructions for the preparation and administration of the remedies: principally *chopping*, *boiling*, *roasting* or *straining* the ingredients. Few measurements for ingredients are given.

There are no diagnostic and semeiological descriptions, or indications of humoral dispositions.[43] The compilers of the text appear to assume that its users do not need detail. These characteristics are discussed more fully further on in this chapter.

The number of chapters in the text varies in all the manuscripts because of omissions or the elision of some of them. Two manuscripts conclude with chapters not present in the rest.[44] In many chapters, there is a plurality of alternative (ἄλλο, *other*) remedies resulting in over one hundred remedies being recorded.

A comparison of the *Therapeutikai* with, say, the perhaps broadly contemporaneous *Epitome de curatione morborum* of Theophanes Chrysobalantes is instructive. Both draw on much the same materia medica, with a leaning towards the use of relatively few ingredients for a recipe. The remedies of the *Epitome de curatione morborum* are mostly preceded by a description of the affections for which they are prescribed. The *Therapeutikai*, in contrast, sets out no more than the recipes under a heading, sometimes loosely descriptive of the affection requiring treatment, sometimes referring solely to the part of the body or to the organ. Does this reflect the disparate sources of the remedies or the competencies of the text's compilers and users?

The text in use

Setting aside the perspective of modern medicine is needed in the study of the *xenôn* and its medical and pharmaceutical practice. The concept of *xenôn* as a hospital might suggest a medieval and lesser version of a modern general hospital, or perhaps some kind of cottage hospital. Neither will do, except as a general way of describing a place of institutional care for the sick and indisposed. As we saw in chapter 1, the Pantokrator *xenôn typikon*, if ever it was more than a legal document without issue, clearly reflects an institution superficially having much in common with any present-day hospital. One significant distinction lies in the charitable intentions generally underpinning the foundation of a *xenôn* as distinct from the sense of social obligation, policy and need that forms the foundation for the present-day hospital.[45] Does, then, this remedy text – on the surface simple, economic, and devoid of theory – resemble the pharmacopoeia of a modern hospital in purpose and intention?[46]

The features of the *Therapeutikai*

The title of the *Therapeutikai* records that the work has been compiled "in conformity with the declared practice of the hospital" in a working form that exemplifies

John Riddle's proposition that the "general medical practitioner of the later Middle Ages reacted to … theoretical medicine by largely ignoring it".[47] The affections listed in the *Therapeutikai* and their remedies are commonplace and, the title records, the subject of *xenôn* protocol. Discussions of diagnosis there undoubtedly were,[48] as the *Miracles of St. Artemios* implies in its advocacy of saintly cures in the mid- to late seventh century.[49] The influence of Galen on Byzantine medicine, perhaps mediated by the later scholar-physicians,[50] underlies extant *iatrosophia* at least to the thirteenth century, if not beyond, even as Eastern and other influences made themselves felt. In the meantime, the schoolmen developed theory to a point where "medieval medical theory (became) so complex as to be unworkable".[51] *What works* remained at the back of a physician's mind as, perhaps, an unspoken precept of bedside medicine. John Riddle also cites Michael McVaugh's belief that "thirteenth-century medicine remained strictly empirical in its use of specific simples and formulaic compound drugs for specific ailments".[52] That the *Therapeutikai*, in the company of the *De curatione morborum* of Theophanes and kindred medical writers of his time, continued to be copied in manuscripts as late as the sixteenth century gives credence to McVaugh's observation.

In their original form the *Therapeutikai* shared with the modern hospital pharmacopoeia the listing of remedies appropriate for prescribing on the ward and in out-patient practice. The criteria for a remedy's inclusion might in medieval times, as now, have included utility, efficacy and economy, or their equivalents. Thereafter they differ, the *Therapeutikai* (as other medieval remedy texts) setting down ingredients, sometimes measurements but rarely their dosage for broadly specified affections. Modern dispensatories set out their contents generically (for example, anti-hypertensives or anti-parkinsonism drugs) usually followed by a list of those preparations endorsed by a clinical panel and accompanied by standard dosages. Neither medieval nor modern text, however, can provide more than a glimpse of the potential clinical activity of either *xenôn* or hospital, except by delineating the range of affections to be found on the wards.

A first reading of the *Therapeutikai* portrays an apparently everyday and elementary range of relatively few affections, giving rise to the assumption that the *xenôn* that was their source practised only a kind of first aid, or at best low-level medicine.[53] But this is perhaps to misread the descriptive terminology of the *Therapeutikai*'s chapter headings, or to compare the text with the encyclopaedic work of, say, Paul of Aegina. There was no pressing need to record treatments for rare or uncommon affections in the *Therapeutikai*. Yet the dividing line between the common and the uncommon is not necessarily clear, and one affection might mimic another more serious one. Experience alone should distinguish the two, although the influence of the humoral approach to prognosis and diagnosis could still result in the same prescription. At a fee'd consultation, at *iatreion* or home, prognosis was a physician's first consideration after a preliminary assessment of the prospects of cure or amelioration. A Byzantine physician was likely to damage his reputation if he attempted to cure a patient whose clinical outlook was once hopeless.[54] There might, however, be a presumption that a stipendiary *xenôn* physician, in contrast, serving a charitable institution would make every effort to treat

and palliate the patient's affection. It was not always so as the story of Sergios the subdeacon suggests.[55] Admitted in the tenth century to the *Euboulos xenôn* after being found unconscious in the street, he responded to no medical treatments, and the *xenôn* eventually discharged him to the care of a Christian hostel. Here, regardless of all expectations, he miraculously recovered.

Preliminaries to admission

How did those admitted, the ἄρρωστοι (*arrôstoi*), come to the *xenôn*? What was *the hierarchy of resort*?[56] Where might an afflicted town or country dweller have turned for accessible healing? Peregrine Horden proposes family or folk medicine as a first resort; then alternatively or subsequently, physicians or saints. Who, apart from the poor or dispossessed, might seek admission or be brought in? The sources show that those holding positions of some responsibility sought admission as well as servants of the Church.[57] But was a *xenôn* selective in granting a request for admission? There is evidence in medieval western hospitals that age, lack of means and the hospital administrator's decision affected admission. The *xenodochoi* or *nosokomoi*, the *xenôn* administrators, appear to have controlled, or at least influenced, admissions in the Late Medieval period in Byzantium.[58] The charitable origins of *xenônes* undoubtedly carried weight in determining admission of the impecunious and those with no recourse to family or friends and in need of medical attention. Broken limbs or ophthalmic trauma were also likely to justify direct admission.[59]

Inevitably the *Therapeutikai* reflect none of these things. Their features are brevity, economy of ingredients and minimal directions, effectively an aide-mémoire for physicians or pharmacist, embodying those remedies capable of simple and swift dispensing for the kind of admissions an urban *xenôn* might anticipate. It contrasts strongly with the texts examined further below, in which some remedies can number up to one hundred ingredients.

Humoral balance

To study the *Therapeutikai* as a utilitarian text is of most value for their interpretation. For example, their omission of fever remedies stands out, but, except perhaps in chapters 21 and 47, there are none.[60] In contrast, there are unexpected remedies; there is one for the inflammation and swelling of the uvula (κιονικὰ ὅταν καταβῇ ἡ σταφυλή).[61] There is space, too, for *toothpowder* (ὀδοντότριμμα, *odontotrimma*; chapter 15), probably intended to ensure healthy gums, stem existing disease, and avoid tooth loss.

There are, however, omissions that, in the context of *xenôn* medicine, are difficult to explain. With the possible exception of the ὑπερσάρκωμα (*upersarcoma*, chapter 41), cancers are not included. Neoplasms tend to present in older age groups, but as average life expectancy is commonly thought to have been about thirty-five years for the general population of Byzantium,[62] it is arguable that carcinoma was relatively rare, often remaining undiagnosed or unrecognised. A patient

admitted with a recognisable cancer was likely to be a rarity, and admission was probably at so late a stage of the disease that survival was improbable.

Other omissions might include obstetrics and gynaecology. Resort to experience or the works of Soranus of Ephesus (first/second century A.D.),[63] Aetius[64] and perhaps the manual attributed to the uncertain Metrodora would serve.[65] Obstetrics, however, were in those times a matter for midwives, not physicians.[66] Were the cerebral pathologies, apart perhaps from vertigo (chapter 5), not encountered, or did they go unrecognised in the *xenôn*? That is unlikely, for epilepsy (the *sacred disease*), phrenitis, lethargy and other affections in this category were well recognised and written about extensively from Galen to Theophanes Chrysobalantes.[67] The likelihood remains that admission with any of these pathologies was rare. Minor surgical procedures (phlebotomy, cupping and cautery), even as adjuncts to remedies, have no place in the text.[68]

As for the humours, the restoration of whose balance was the aim of Greek and Byzantine medicine, there is scarcely any reference to them. The three that are discoverable in the *Therapeutikai* are all in the miscellany of remedies after the *a capite ad calcem* portion of the text. The first is at chapter 48 (emetics) and the second at chapter 50 (for buboes and the plague). The third reference is in chapter 67, St. Gregory's *Salt*, whose claim it was that the concoction "does not suffer phlegm, bile or chyme" (chapter 67). Yet, the influence of the theories of humours in medicine remains patent in medical writings and in chronicles of this period; for example, in the *De curatione morborum* of Theophanes, *passim*, the already mentioned observations of Psellos in his description of the illness of Emperor Constantine IX (emp. 1042–1055), or Anna Komnena's narrative of the last illness of her father. Absence of reference to humoral process in the *Therapeutikai* is explicable by the virtue of brevity and the expectation of a physician's familiarity with humoral theory as it informed prescribing; alternatively a *xenôn* physician's diagnosis pre-supposed that the remedy would achieve a restoration of humoral balance. An effective remedy should need no humoral justification, just as remedies that risked harm to patients were unlikely to be selected or handed down. In the words of John Riddle, "[H]uman beings were not so unintelligent that they could be fooled if they had received mostly certain and definite harm as a result of their medical care."[69] But lack of harm differs from failure to cure or palliate an affection, perhaps by God's will, even if healing was sought, not at the hands of physicians, but of wise women or herbalists or itinerant quacks. To quote John Riddle again: "[A]s long as people had simple diagnosis of headaches, it mattered little in one respect what they thought were their aetiologies, as long as the remedies were effective."[70]

Semeiology

Although the practicality of the *Therapeutikai* as a text for instruction and transmission of knowledge is not readily evident, it is self-evidently a text for use by those familiar with the affections described; for an experienced practitioner, semeiological and aetiological description in the text would be otiose. The "decoction

for giddiness" (chapter 5), for example, clearly presumes that the physician has already used his clinical judgement about the nature of the patient's affection. There is no need for an introductory note of the kind found in chapter 35 of Theophanes Chrysobalantes' *De curatione morborum*.[71] The *Therapeutikai* are a physician's working text, though they may be open to use by, say, the intelligent layman, the traveller, the healer remote from towns and cities, or the monk with a working knowledge of healing.

Yet even this perception of the *Therapeutikai* is open to question. The indicative table of categories and titles (Table 4.4) combines the specific with the general; for instance, there are "trachoma of the eye" (chapter 8) or "gout" (45) that were commonly understood or experienced and unlikely to be open to alternative diagnosis. Some headings appear to signify common affections with straightforward signs and symptoms that, nonetheless, may be capable of inaccurate interpretation – that for external haemorrhoids furnishes an example (49). Beyond these are the generalised and often ambivalent headings such as "affections of the liver and pleurisy" (21), "kidney affections" (31) or "affections of the bowels" (19), all internal. The affection that "some call *gluku*" (54) is unfamiliar until explained as a pustular and inflammatory affection about the hair roots, perhaps pityriasis or its like. From the perspective of modern medicine, in which the comparison of signs and symptoms distinguishes between affections of similar character (differential diagnosis), the use of remedies appended to non-specific headings appears hazardous.

There must remain an assumption that the trained physician or pharmacist is able "to interpret the symptoms so as to understand the nature of the disease and prognosticate its progress in order to better treat it".[72] The heading "for affections of the liver and pleurisy" (chapter 21) illustrates a refinement of this broad diagnosis. The remedy uses watered wine for the feverish and, for those without a fever, neat wine. Here is a distinction recognised by Paul of Aegina in his chapter on liver affections, which he describes as various.[73] The trained physician will make the distinction and recognise the humoral dispositions that accompany them. The next three remedies in the *Therapeutikai* also treat of liver and pleurisy but remain non-specific about the diagnosis for which each remedy is a prescription (chapters 22–24).

In contrast, there appears to be in the first three chapter headings of the *Therapeutikai* careful distinction between types of pain in the head. The three headings – for an acute pain in the head, for a pain in one side of the head, and for a pain in the head and in one side of the head − make the distinctions clear. The remedies under each heading are embrocations to be applied to the forehead. Graeco-Byzantine medicine distinguished carefully between head pain resulting from excessive heat, cold, wine or *duskrasia* (bad temperament). It also distinguished between acute head pain (*kephalalgia*) and chronic head pain (*kephalaia*).[74] Neither word is used in the first remedy for a sharp pain in the head (chapter 1). This is explicable if "a sharp pain" is a substitute for *kephalalgia*, which may have fallen out of use in everyday speech or usage – or if it denotes some specific affection which is not clear from the context. The first prospect is unlikely, for Theophanes Chrysobalantes used *kephalalgia* in the tenth century[75] and Nikolaos Hieropais in the

seventeenth century.[76] The second prospect, that of some unclear but specific affection, is similarly unlikely, for the remedy that follows (κίσσος, *kissos*, "ivy") is discoverable as far back as Dioscorides for the treatment of a non-specific headache.[77]

Chapters 2 and 3 each refer to ἡμικρανία (*hêmikrania*), a term used indifferently for migraine and headache on one side of the head.[78] Migraine has a particular association with intensity of pain and recurrence; yet a headache on one side of the head may equally well be no more than a description of a headache's location. Paul of Aegina distinguishes between headache (κεφαλαλγία, *kephalalgia*) and various causes thereof including bilious humour, wine and a blow;[79] he follows[80] with affections of the head and face (περὶ κεφαλαίας καὶ ἡμικρανίας, *peri kephalaias kai hêmikranias*).[81] The three chapter headings in the *Therapeutikai* undoubtedly represent this distinction, although the terminology used by Paul and the *Therapeutikai* differs.[82] The difference is perhaps attributable to the passage of time between the *floruit* of Paul circa 600 and the presumed date of the *Therapeutikai*'s compilation some four hundred years later.[83]

There is no comparable differentiation elsewhere in the text except in the broadest sense in the use of physical signs as indicators of the appropriate remedy. In the group of remedies on the eyes, chapters 7–10, the first is probably for inflammation, the rest specifically for trachoma, itching and discharge. This is a broad range of signs in a speciality in which Greek medicine excelled in its categorisation and definition of the pathologies in detail.[84] These four remedy headings in the *Therapeutikai* are far from exhaustive, although the signs and symptoms may be those most commonly met in everyday medical practice.

Among the chapters that are non-specific until the context is clear on reading is chapter 19, *koiliaka*, affections of the bowels. But the subject of this remedy is *drakontiasis*, the Guinea-worm disease, once prevalent in Byzantium.[85] Its association with "affections of the (bowels or) intestines" is not at first sight clear, for the nematode of Guinea-worm disease burrows beneath the epidermis.[86] Later, Arabo-Islamic physicians were of the opinion that it was a varicose vein and not a nematode.[87] This may explain why the *Therapeutikai* prescribe an ointment with the instruction "Plaster on the ointment quickly so that he may not suffer guinea-worm disease" – that is, the mortification of the flesh should the winding out of the worm fail and a portion of the worm be left under the epidermis. If there was recognition that the drinking of bad water, in which the parasite bred, affected the stomach, the heading κοιλιακά (*koiliaka*) may be a reference to this. Alternatively, the chapter may be a surviving conflation of remedies for two affections, or a miscopying of *drakonti-*. Non-specific headings in the *Therapeutikai* may therefore be explicable and indicative of semeiological interpretation, as well as intelligible to the medieval physician.

Materia medica

The sources, properties and preparation of medicines, the science of materia medica, were the subject of Galen's *De simplicium medicamentorum temperamentis et facultatibus*.[88] Alexander of Tralles claimed that by using the remedies

he described, there was no need to look further.[89] Paul of Aegina, drawing on Aetius, summarised the stage that drug theory by his time had reached and how drug properties could be identified.[90] The *Therapeutikai* does not vary in essence from the customary form of remedy seen in the Galenic tradition of pharmacology. Aristotelis Eftychiadis' four categories are the following:

- new forms of preparations;
- new substances;
- new uses of existing substances;
- modification of traditional preparations.

Descriptive of aspects of the pharmacology of Ioannes Aktouarios, these are not readily evident in the *Therapeutikai*.[91] The more extensive polypharmacy of the texts *Xenonika I* and *Xenonika II* in manuscript *Parisinus graecus* 2194 is yet to come. Within the small compass of the *Therapeutikai*, the number of ingredients specified amounts to nearly a third of those listed in chapter 3 of the seventh book of Paul's *Epitome medicinae*, in which animal, vegetable and mineral simples number nearly seven hundred; subsequently there are an additional four hundred compound preparations of various kinds in later pages of the book.[92] The ingredients used in the first sixty-seven chapters of the *Therapeutikai* number some 208 animal, plant and mineral substances, a number not much different from that of the *Prostagai*, where the ingredients total 223 (189 plants, 26 parts or products of animals, and 8 minerals). Besides the plants and spices, there is the produce of trees − root, bark, fruit, nuts, leaves, resin and seeds. Grain and cereals are commonly used and include bran, barleycorns and meal, millet, wheat, flour and spelt. Other ingredients fall into the classification of plant oils, wine compounds, honey compounds, mineral and animal compounds together with their products, including fats, eggs and butter. Most of these are commonplace in ancient medical tradition, although some resist identification.[93] Compound remedies identified by a generic name, which total more than one hundred in the *Prostagai*, are almost entirely absent from the *Therapeutikai*: only κοκκία καθαρτικὰ Γαληνοῦ (*kokkia kathartika Galênou*, *Galen's Purgative Pills*, chapter 51), Μαρκίατον (*Markiaton*, the *Markiate* [*medicine*], chapter 58) and ἁλάτιον σκευασθὲν ὑπὸ τοῦ ἁγίου Γρηγορίου τοῦ θεολόγου (*alation skeuasthen upo tou agiou Grêgoriou*, *St. Gregory's Salt*, chapter 67) are specified. All the ingredients are likely to have been easily procurable, including the spices and other imported plant ingredients.[94] At the presumed time of the text's compilation, Byzantium was an important trading centre for many valuable spices.[95]

Overview of the *Therapeutikai*

If the text reflects the affections most frequently encountered in the *xenôn*, it also tends to reflect the presumption of a simple cause until the contrary is evident, and witnesses the precept that common things occur commonly. Common affections, in turn, call for relatively few alternative remedies (at the most there are five

in chapter 49 on haemorrhoids in the *Therapeutikai*). The number of alternative remedies in the *Therapeutikai* is far fewer than, say, in any one of the three books of the Pseudo-Galenic *Euporista*. "Alternative" is a misleading term since the first in any series of remedies under a heading is not necessarily the principal one. It is better to speak of a plurality of remedies with the inference that the number of remedies for an affection may be in inverse proportion to their curative properties.[96] More realistically, if a remedy works, it is worth recording for future use. Another misconception is that a plurality of remedies is in descending order, from most efficacious to that of last resort. Chapter 33, *diuretics*, contains a fifth and last recipe for boiling millipedes in oil and smearing the concoction and any superfluous millipedes over the bladder. Millipedes have long been used as diuretics; they are first recorded by Dioscorides[97] and many centuries later in the *Edinburgh Dispensatory* as late as 1811.[98]

The compilers of the *Therapeutikai* chose not to call in aid magic in the remedies. Neither the magic formulae, of the kind dispersed among the more *orthodox* medical texts in the codices *Vaticanus graecus* 299 or *Parisinus graecus* 2236, nor magic such as that described by Henry Maguire in his *Byzantine Magic*, appear.[99] An omission from the written record, or discretion in use, or a sign of the temper of the times may account for its absence, but probably there was no place for it in Byzantine medicine, let alone in a Byzantine *xenôn*. Yet, remedy lists need not be absolutely prescriptive, requiring rigid adherence, but open to modification if, in the physician's view, the patient's condition, age and other circumstances so dictated. An absence of specification of quantities and measurements reflects reliance on clinical judgement.

The title, in which subsists the *Therapeutikai*'s value for the historian, implies that it is a text authorised for *xenôn* use. In one interpretation, it suggests that the *xenôn* had well-established procedures that required the use of a dispensatory of tried and tested remedies. This is comparable with the *Prostagai* text whose title together with an element of its contents implies much the same, with an emphasis on the patients (τοῖς πάσχουσι, *tois paschousi*). Lacking are diagnostics and semeiology and remedies for some affections that a medical perspective might, *mutatis mutandis*, look for in a *xenôn*. Most valuable is the recognition that a *xenôn* saw fit to have a text of this kind compiled to such effect that it was copied, albeit in tandem with the texts of Theophanes Chrysobalantes, for some centuries thereafter.

Sources and influences

The sources of, and influences on, the *Therapeutikai* would merit less attention if it were not for its associations in manuscript with the works of Theophanes Chrysobalantes and the remedies that they share with other texts, chiefly the *Therapeutics* of Ioannes Archiatros, who in turn also borrow from Theophanes.

Up to this point we have treated the *Therapeutikai* in their various aspects as one of the few extant *xenôn* remedy texts. Some remedies have already been discussed; the date of the *Therapeutikai* has been touched on above but now needs to be reviewed in terms of the remedy text of one Ioannes, generally distinguished from

other medical writers with the name of Ioannes by the designation *Archiatros*.[100] The date of its compilation is most likely to have been the thirteenth century and its earliest manuscript copies to have been made in and from that century when the text was revised and augmented several times.[101]

Until recently the *Therapeutics* of Ioannes Archiatros have received little scholarly attention. Charles Daremberg asks, "[Q]uel est le médecin appelé Jean … ?"[102] In answer, he dismisses the possibility of Ioannes of Alexandria and observes that the text was first written in the style of the eighth century (if, indeed, that were determinable). Aristotelis Kousis discusses a number of manuscripts containing Ioannes' work but offers no *floruit* for him.[103] In his "Contributions à l'étude de la médecine des zénons (*sic*) pendant le XV^{e} siècle," he remarks that Ioannes' text provided the archetype for the *therapeutikai iatreiai* text (that is, the *Therapeutikai*).[104] Herbert Hunger speaks of Ioannes only by reference to a "bestimmten Johannes", to whom he attributes the *Therapeutikai*. He also mistakenly identifies him with a Ioannes Spensatos (so named from a misreading of *speusantos* for *spensatos* in the manuscript *Parisinus graecus* 2236), whom he calls a *ghost*.[105] Aristotelis Eftychiadis places him in the eighth century without comment.[106] And Timothy Miller confines himself to placing Ioannes in "the Dark Age".[107]

Barbara Zipser has now shown, on the internal evidence of the text and its stylistic origins, that it is assignable to the early fourteenth century (ca. 1320).[108] The earliest manuscript copy in classicising Greek, extant only in the codex *Monacensis graecus* 551,[109] subsequently took new shape by the addition of extended glosses on the text of most of its remedies, rendered in vernacular Greek.[110] In both versions, there are remedies common to Ioannes and the *Therapeutikai*.

Did Ioannes know of and have access to the *Therapeutikai* and consequently borrow directly from it? Alternatively, it may be that there was a now lost remedy text from which a number of remedies made passage to the *Therapeutikai*, as well as to the *Therapeutics* and two other codices.[111] This mode of transmission is naturally impossible to prove or disprove, but it countervails too ready an assumption that transmission was directly from the *Therapeutikai* to Ioannes' *Therapeutics*. As Barbara Zipser observes in the introduction to her edition of this manual, "[S]imilarities [between texts] do not necessarily indicate a linear development from one text to another."[112] On that argument, the *Therapeutikai* might have rested on this postulated source in the same way as Ioannes did almost two centuries later. Speculation is not, however, fruitful here, for there remains between the *Therapeutikai*, the *Therapeutics* of Ioannes, and the *De curatione morborum* of Theophanes Chrysobalantes a tenuous relationship.[113] Joseph Sonderkamp noted this, observing that if no linear relationship existed between the three, any relationships were none the less significant.[114] The direction of Ioannes' borrowing is clear in the case of the *De curatione morborum* so long as a *floruit* for Theophanes Chrysobalantes in the reign of Emperor Constantine VII Porphyrogennetos (945–959) is admissible.[115] The temporaneous relationship potentially underlying the borrowings is that of Theophanes of the tenth century, the *Therapeutikai* of the period 1050–1150, and Ioannes of the early fourteenth century.

Joseph Sonderkamp also proposes that the *Therapeutikai* represent "more or less a duplicate copy" (*Dublette*) of the *De curatione morborum*, although he does not go so far as to say that Theophanes Chrysobalantes compiled the *Therapeutikai*.[116] Yet the scale, range and design of the texts are not the same. Nor are the *Therapeutikai* a synopsis or selection from the *De curatione morborum*, although there are occasional faint echoes of phrases of the one in the other. It is the varying order of Theophanes' works in relation to the *Therapeutikai* text in the manuscript that helps to establish the *Therapeutikai*'s manuscript traditions and to confirm the common textual variants within these groups.[117] It is, however, an association that occurs in only eleven of the 104 manuscripts containing texts of Theophanes that Joseph Sonderkamp identifies (see Table 4.2).[118] So small a percentage scarcely justifies the attribution of the *Therapeutikai* to Theophanes Chrysobalantes as Sonderkamp accepts, quoting Edouard Jeanselme saying of the *Therapeutikai*, "[E]n quelque sorte une pièce détachée, qui ne fait pas corps avec ce qui précède et ce qui suit."[119] A hypothesis for the inclusion of this *pièce détachée*, and its subsequent survival and copying, is that of chance copying at the foot of some lost autograph manuscript that comprised works of Theophanes Chrysobalantes, and its subsequent transmission in that form. It is not so very different an action, except in scale, from that of noting in a margin a useful recipe that comes to be conflated with the text and seen as part of it.

Other associations

A constant movement of remedies in texts, like some underwater current, becomes apparent with every remedy text studied; as with a current, the direction of movement is not always visible. The first chapter in the *Therapeutikai* provides an

Table 4.5 Comparison of the remedies against headache in the *Therapeutikai* and the *collectanea medica* of codex *Vaticanus graecus* 299

Therapeutikai	Vaticanus graecus *299, f. 305r*	Vaticanus graecus *299, f. 306r*	Vaticanus graecus *299, f. 306v*
πρὸς ὀξὺν πόνον κεφαλῆς. κισσὸν ξηράνας ἢ καὶ χλωρὸν κοπανίσας, ἀπόβρεχε εἰς ἔλαιον, ὀθονίῳ δὲ διηθήσας, χρίε τὸ μέτωπον καὶ τοὺς κροτάφους.	Παύλου διάφοιροι λόγοι· περὶ κεφαλαλγίας περὶ ὀξυπόνων κεφαλῆς· κισσὸν ξηράνας ἢ καὶ χλωρὸν κοπανίσας ἀπόβρεχε εἰς ἔλαιον · ὀθονίῳ διηθήσας καὶ χρίε τὸν τόπον τοῦ κροτάφου καὶ τοῦ μετώπου.	πρὸς πόνον κεφαλῆς παῦον παραχρῆμα. κισσὸν ὄξει λειώσας ἀπὸ κροτάφου ἕως κροτάφου ἐπιχρίε τὸν μέτωπον.	εἰς ὀξὺν πόνον κεφαλῆς. κισσὸν ξηράνας καὶ χλωρὸν κοπανίσας ἀπόβρεχε εἰς ἔλαιον · ὀθονίῳ διηθήσας χρίε τὸν τόπον καὶ τοὺς κροτάφους.
ἄλλο. ἐλάφου ὀστοῦν καύσας, λέανον σὺν ῥοδίνῳ ἐλαίῳ καὶ κατάχριε.	**ἄλλως** · ἐλάφου ὀστέον καύσας λεάνας σὺν ῥοδίνῳ ἐλαίῳ χρῶ.		

example. The *collectanea medica* in the codex *Vaticanus graecus* 299 appear to suggest a source of this remedy, for a passage in it contains the commonplace heading:[120]

παύλου διάφοροι λόγοι · περὶ κεφαλαλγίας · περὶ ὀξυπόνων κεφαλῆς

The instructions in the *Therapeutikai* call for dried or pounded green ivy, soaked oil, to be strained through a cloth and the resultant liquid to be rubbed on the forehead.

The text that follows is almost identical with lines beginning of the *Therapeutikai*'s chapter 1. The same Vatican manuscript repeats the selfsame title and text without attribution to any writer.[121]

The remedy also appears in other texts (see Table 4.6). Dioscorides lists ivy juice for administration *per narem* for chronic headache.[122] Ivy appears twice in the third book of the pseudo-Galenic *Euporista*.[123] Paul of Aegina,[124] using Galen as his source, speaks of it partly as a sternutatory (as well as being good for killing lice).[125] He also proposes the juice for use in headache from heat and wine. There is a hint of the use of ivy juice in Theophanes Chrysobalantes for persistent headache caused by wine.[126] This testifies to a traditional part for ivy juice to play in remedies for headache, but there is no evidence for its use as an epithem.[127]

It is not always necessary, however, to seek the same form of words as evidence of an earlier source; there are only so many ways of writing a straightforward prescription. If this means, in an argument from the particular to the general, that most of the remedies exemplify a static medicine, it can also mean that proven remedies merit reiteration. An alternative view is that, while humoral medicine was an obstacle to understanding true aetiologies, the distinction between the causes of an affection and the rationale for the medication prescribed was becoming diminished. On the strength of the *Therapeutikai* (to return to the particular from the general), was *xenôn* medical practice less reliant on humoral theory than on the efficacy of remedies that may have worked more often than not? It seems probable.

Users of remedy texts

A remedy text has by its nature fewer readers or, more accurately, users, than a literary or didactic text. Its use may range from that of selective aide-mémoire to compendium; in its simplest form, it becomes a practical handbook for travellers, dwellers in remote regions or monastics. Survival of a text depends not only on that of the manuscript alone but occasionally on some form of association with another valued text; the *Therapeutikai*'s survival has patently been dependent on the transmission of the works of Theophanes Chrysobalantes.

John Riddle observes, however, that "medical progress was not solely dependent on written language".[128] Oral transmission was an equally important means of disseminating a remedy, whether in formal instruction and teaching or the handing down of remedies in families that practised medicine in earlier centuries. Searches

Table 4.6 Ivy for the treatment of affections of the head

Therapeutikai	*Diosc.*, M.M., *2.179*[1]	*P. Eg.*, Epitome[2]	*Theoph.Chryso.* [3]	*[Gal.]*, Eupor.[4]	*[Gal.]*, Eupor.[5]	*[Apul.]*, Herbar.[6]
κισσὸν ξηράνας ἢ καὶ χλωρὸν κοπανίσας, ἀπόβρεχε εἰς ἔλαιον, ὀθονίῳ δὲ διηθήσας, χρίε τὸ μέτωπον καὶ τοὺς κροτάφους	(κισσός) ῥινεγχυτοῦται δὲ ὁ χυλὸς τῶν φύλλων καὶ τῶν κορύμβων σὺν ἰρίνῳ ἢ μέλιτι ἢ νίτρῳ πρὸς τὰ χρόνια τῆς κεφαλῆς ἀλγήματα καὶ ἐπιβρέχεται σὺν ὄξει καὶ ῥοδίνῳ	. . . ἢ κισσοῦ κόρυμβοι ἑφθοὶ ἐν ὄξει, συλλεανθέντες δὲ ῥοδίνῳ . . .	. . . ῥόδινον καθ᾽ ἑαυτό τε καὶ σὺν ὄξει, ἢ χυλῷ κισσοῦ, ἢ κράμβης διαχρίσωμεν . . .	τὸ κόμμι κισσοῦ τῷ ὄξει τε καὶ ἐλαίῳ ῥοδίνῳ διαλύσας τοὺς κροτάφους κατάχριε	κισσοῦ ἀκρέμονας ἐλαίῳ ἑψήσας βρέξον τὴν κεφάλην καὶ θαυμάσεις . . .	Herbae hedere Cum oleo rhosaceo et cum suco eius mixtos vino tempera et frontem perfricabis sedat dolorem

(1) *Dioscurides*, *De materia medica*, 2.179 (ed. Wellmann 1906–14: 1.249.8–10).
(2) *Paulus Aegineta*, *Epitome medicinae*, 3.4.2 (ed. Heiberg 1921–24: 1.138.8–9).
(3) *Theophanes Chrysobalantes*, *Epitome de curatione morborum*, 24 (ed. Martius 1568: 18).
(4) [*Galenus*], *Euporista*, 2.3 (ed. Kühn 1821–1833: 14.399.15–16).
(5) [*Galenus*], *Euporista*, 3. πρὸς ἡμικρανίαν (ed. Kühn 1821–1833: 14.500.11–12).
(6) [*Apuleius*], *Herbarium*, *sub verbo Hedere nigro* (ed. 1481).

for new ingredients and report of their merits from others added, as in Galen's case, to the pharmacotherapeutic repertoire. Their subsequent incorporation in a written record is likely to follow. The twelfth-century physician Eustathius writes to send to a fellow clinician a report of the paediatric surgery of a Frankish physician in Bulgaria: "I have heard", he begins, ". . . from some reliable men (of the city) of Soskon . . ." and so on.[129] An unknown Leo sends to Eustathius a letter about various treatments for a sore throat.[130] There is also record of a remedy for sore throats, "as we have been taught at the *xenôn*".[131]

The transmission of recipes is now presenting itself as a continuing passage and exchange of knowledge. The *Dynameron* of Nicholas Myrepsos is a vast compendium of remedies from widely spread Eastern and Western sources, collected, categorised and recorded. There can be no certainty about the efficacy of the recipes in these great collections, whereas an institutional dispensatory may contain the element of *what has worked*.[132]

The physical survival of some texts is self-evidently a matter of chance; medical texts have a practical utility that may tend to their preservation, whether they are the texts of the scholar physicians or the sole record of a physician's working lifetime. The survival of individual remedies is less certain in transmission. In the manuscripts that record the *Therapeutikai*, there are alterations to remedies, omissions in – and of – remedies, and similarly additions to their number. A copyist may amend an ingredient to one of his preference; measures, where they exist, may double from one manuscript to another. That the *Therapeutikai* have maintained a relative integrity in each of its surviving versions is notable.

But did Ioannes borrow directly from the *Therapeutikai*? Were the *Therapeutikai* his direct source for the remedies common to both? Where the text is silent, presumption remains limited to the common individual remedies. Similarly, the *Therapeutikai*'s remedies are likely to be borrowings from other, and earlier, sources. The remedy used as an exemplar recurs in comparable form elsewhere, suggesting that it had long been available to compilers; yet no source is traceable. Even if it were possible to trace a remedy to, say, Galen, without evidence to the contrary, it is likely that he, too, was reliant on an earlier source. But attributions may in turn be doubtful.

The remedy for scotomy (chapter 5) is comparable to its equivalent remedy in Theophanes Chrysobalantes[133] as well as to another in the *Prostagai* text.[134] There are also three instances of it in codex *Florentinus Laurentianus* 75, 19, the first attributed to Galen, the second to Paul (though whether of Aegina or Nicaea is unspecified), and the third that is simply designated *From another* (ἑτέρου, *eterou*).[135] The wording of each is not identical, but each remedy for this affection has similar ingredients (Table 4.7).

Common ingredients for common affections are recurrent in remedy texts. There is rarely merit in seeking to identify sources in this kind of text; the merit lies in observing the continuity, *inter alia*, of Byzantine medicine, not as a fossilised medicine, but as one that also stepped beyond its inheritance of Graeco-Roman medicine and was to influence and in turn be influenced by Islamic medicine.

Table 4.7 The different prescriptions for the treatment of scotomy

Therapeutikai	*Theoph. Chry.* (1)	*Vat. gr. 292 Prostagai* (2)	Vat. gr. *299 Iatrika* (3)	Laur. *75, 19 f. 96v* (4)	Laur. *75, 19 f. 97r* (5)	Laur. *75, 19 f. 97r* (6)
ἄνηθον, ὕσσωπον, καὶ στοιχάδα μετὰ ὕδατος ἑψήσας δίδου πίνειν	δοτέον δὲ καὶ τὴν στυχάδα σὺν ὑσσώπῳ καὶ ἀνθίου σπέρματι πίνειν	πρόσταξον τὸ μικρὸν ἀπόζεμα, ὅπερ δέχεται ὕσσωπον, ἀνιθόξυλα, στυχάδα, γλήχωνα, ὀριγάνην, ἰσχάδας λιπαράς μέλι καὶ ὕδωρ	τοῖς δέ γε σκοτιζομένοις δίδου πρῶτον μὲν τὸ μικρὸν ἀπόζεμα, ὅπερ δέχεται ὕσωπον, στιχάδα, ὀρίγανον, γλήχωνα καὶ καλαμινθὶν καὶ ἀνηθόξυλα	δοτέον δὲ καὶ τὸν στοιχάδα σὺν ὑσσώπῳ καὶ ἀνήθῳ πίνειν	πρόσταξον καὶ τὸ μικρὸν ἀπόζεμα ὅπερ δέχεται ἀνηθόξυλα, ὕσσωπον, στοιχάδα, ὀριγάνην, γλήχωνα, καλαμίνθην, ἰσχάδας λιπαράς, μέλι καὶ ὕδωρ	στοιχάδα, ὀριγάνην, γλίχωνα, καλαμίνθην, ὕσσωπον, ἄνηθον, πολυπόδον, ἕψαι μετὰ ὕδατος καὶ δίδου πιεῖν

(1) Theophanes Chrysobalantes, *Epitome de curatione morborum*, 35 (ed. Martius 1568: 44.1–4).
(2) *Vaticanus graecus* 292, f. 208v, ll. 3–23 (προσταγαί).
(3) *Vaticanus graecus* 299, f. 254r, ll. 21–23 (*iatrika*).
(4) *Florentinus Laurentianus* 75, 19, f. 96r, *in marg. ad l.* 22 (unified text, attributed to Galen).
(5) *Florentinus Laurentianus* 75, 19, f. 97r, *in marg. ad l.* 3 (unified text, attributed to Paul [of Egina? or of Nicaea?]).
(6) *Florentinus Laurentianus* 75, 19, f. 97r, *in marg. ad l.* 22 (unified text, attributed ἑτέρου [*From another*]).

Notes

1 Riddle 1992: XV.18.
2 Manuscripts are listed according to the groups defined below. In each group, they are mentioned in alphabetical order of their current location (English translation of city names).
3 On the meaning of the adjective *antiquus* in manuscript descriptions in Renaissance scholarly literature, see Rizzo 1973, particularly 164–167. It should not lead to the conclusion that the present codex was in majuscule (all the more because it was on parchment) and dated to the ninth century at the most.
4 Park and Henderson 1991: 164–188, 174.
5 Ed. Thorndike 1946. For Rufinus' sources, see *ibid.*, particularly xxvi–xxxii.
6 For the Latin versions of Dioscorides, *De materia medica*, see Riddle 1980: 6–8 and 20–27.
7 For a recent *status quaestionis* about the work and its origin, see Ventura 2007. For the edition of one of its many versions, see Wölfel 1939.
8 *De viribus herbarum*, ed. Choulant 1832. On this identification and period, see Crossgrove 1994.
9 On this not-identified *Alexander philosophus*, see Thorndike 1946: xxx.
10 Edition by Posthius 1570: 327–605. On Isaac, see Glick et al. 2005: 275–276 *sub nomine* (R. Veit).
11 For the text, see the facsimile edition of the 1471 printed edition in Goltz 1976.
12 The three works of Theophanes are the *Epitome de curatione morborum* (ed. Bernard 1794), *Synopsis de remediis*, and *De alimentis* (ed. Ideler 1841–42, 2. 257–281).
13 See the catalogue of the manuscripts burnt in the Escorial fire of 1671 in De Andrés 1968: 137, n312. A similar notice can be found in Miller 1848: 354, n334 (in French with the Greek title of some of the treatises in the manuscript). The manuscript was identified as E.IV.16.
14 Sonderkamp 1984: 29–41, esp. 33, where an oblique reference to *Therapeutikai* occurs.
15 For a description of the manuscripts containing Theophanes Chrysobalantes, *De curatione morborum*, together with their contents (including the identification of the folios where *De curatione morborum* can be read), see Sonderkamp 1987. The discussion of the stemma that follows owes much to this work.
16 The title of the codex British Library Add. 5119 is very close in wording to that of the *Therapeutikai*; that of the Venice codex has some minimal resemblance.
17 Zipser 2009: 37.
18 A stemma for so short and minor a formulaic text must be a doubtful enterprise. The detailed overview of contents of the *Therapeutikai* in this volume combines the best readings of the manuscripts. This eclectic method is, in the opinion of the classical scholars Leighton D. Reynolds and Nigel G. Wilson (Reynolds and Wilson 1991: 224 and 239–240), justifiable in the *open tradition*, to which the *Therapeutikai* belongs.
19 Edition by Langkavel 1848.
20 Wallis 1995: 109: "Pharmacology, *materia medica* and recipe literature are by far the best represented subject areas in the (medieval) manuscripts. In consequence, probably the most disturbed textual traditions are found in the herbal pharmacology".
21 For this text see Hunger 1969: 85, §§ 14–20 included.
22 Sonderkamp 1987: 302 (*Die Familie d*).
23 For these manuscripts, see Sonderkamp 1987: XVIII–XIX.
24 The fourteen chapters that it shares with the *Therapeutikai* keep to their order but occur at intervals among the first fifty-five remedies in Ioannes' text (at Ioannes' chapters 1, 3, 4, 9, 10, 11, 16, 17, 20, 22, 27, 32, 44 and 55 in the edition of Zipser 2009). The borrowings from the *Therapeutikai* do not necessarily comprise a discrete chapter in Ioannes' text.

25 See Ackermann 1821: CLV. The period of the compilation of the third book of the *Euporista* is uncertain. See Ackermann 1821: CLIV. Parts of it may post-date the *Therapeutikai*. Greek text in Kühn 1821–1833: 14.492–581.

26 On this manuscript, see Mercati and Franchi de' Cavalieri 1923: 425–430.

27 Litavrin 1993: 98. The first seventy-five folios of the codex consist of fragments of theological works.

28 Earlier scholars such as du Cange 1688: 35, ll. 14–17, in the Index Auctorum ("*Colloquium Theodosii* de Diaeta, seu de alimentorum facultatibus . . . Theophranes appellatur" [see Sonderkamp 1987: 34–35, n67]) and also Albrecht Haller 1771–72: 1.169 (see Sonderkamp 1987: 41, n80) appear to have believed the *Therapeutikai* to be a minor work of Theophanes with no other justification than the association of the *Therapeutikai* with one or more of the three works attributed to Theophanes, in all but one instance following his *Epitome de curatione morborum*. This association occurs, however, in only eleven of the 141 manuscripts of Theophanes (that is, in the manuscripts that contain the *Therapeutikai* [Table 4.1]).

For the identification of Theophanes' work in these manuscripts, see, principally, Sonderkamp 1987: 73–75, especially 74 (Athens 1499); 78–79 (Athos Iviron 151); 101–103, especially 102 (Florence 7, 19); 130–131, especially 131 (Munich 105); 136–137 (Oxford, *Barocc.* 150); 144–146, especially 145 (Paris 2091); 156–157 (Paris 2194); 163–164, especially 163 (Paris 2229); 165–167 (Paris 2236); 195–197, especially 196 (Paris, *suppl. gr.* 764); 237–240 (Vienna, *med. gr.* 32).

29 For the text, see ff. 33v–61r, with the title at f. 33v, ll. 10–12.

30 *Gregorius*, *Alatium*, ed. Ideler 1841–42: 1.297–298.

31 On uvulitis in current epidemiology, see Lathadevi et al. 2005.

32 The *Corpus Hippocraticum* considered it as possibly deadly (see *De morbis I*, 3, ed. and Fr. tr. Littré 1839–61: 6.144, ll. 9 and 21; ed. and Engl. tr. Potter 1988: 104, ll. 1 and 16). The Greek Aretaeus (first century A.D.[?]) dealt with it extensively in *De causis et signis acutorum morborum*, I.8 (ed. Hude 1958: 9–10; Engl. tr. Adams 1856: 252–253). Ablation was sometimes necessary. The Arabo-Andalusian surgeon Abu al-Qasim al-Zahrawi (960–1013) best known in the West as Albucasis describes the procedure in chapter 37 in the thirtieth treatise of his *Chirurgia* (eds. Spink and Lewis 1973: 306–311). Anna Comnena observes the humours making their way into her father's uvula in his last illness (*Alexias*, XV.11 [ed. Reifferscheid 1884: 2.310, ll. 9–10 = Reinsch and Kambylis 2001: 1.497, ll. 27–28]). On otolaryngological affections in Byzantium and their treatment, see Ramoutsaki et al. 2002.

33 For example, *Paulus Aegineta*, *Epitome medicinae*, 4.1 (Heiberg 1921–24: 1.317–321; Engl. tr. Adams 1844–47: 2.1–15).

34 The Paris manuscript *graecus* 2236 is dated to the fifteenth century (see Omont 1888: 219). An analysis of its text of the *Therapeutikai* shows that it deviates little from the texts in other manuscripts. The text of the *Therapeutikai* is preceded by a table which has the following title (f. 54r): "πίναξ τοῦ προκειμένου τμήματος ἐκ διαφόρων ἰατροσοφίων ἐκ τε παλαίων καὶ τῶν καθ' ἡμῶν". The expression καθ' ἡμῶν suggests that the copyist either discarded the title of the *Therapeutikai* attested by all the other manuscripts or did not understand what *xenôn* was. Alternatively, it may have been missing from his exemplar. The title is also recorded in codex *Scorialensis* E.IV.16. Its last item is identified in Miller 1848: no. 334, as "Extraits de thérapeutique tirés de differents auteurs, κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος". In De Andrés 1968: 137, no. 312, the same text is identified as follows: "medicamentorum expertorum iuxta usum hospitalis miscellanea".

35 The analysis of titles was carried out using Karas' catalogue of Greek medical manuscripts (Karas 1994: 34, 50, 57, 59, 89, 96, 135, 139 and 141). All but one example (*ibid.*: 34: " . . . συντεθεῖσαι εἰς τὴν γαλλικὴν διάλεκτον . . ." in the title of the 1780 treatise by Geôrgios Vendotis [1757–1795]) are best translated as "collected".

36 See Sophocles 1914: 106; and, more recently, Trapp 2001: 45*, sub verbo* in both.
37 The source of good *xenôn* practice is its *typikon*. Since we do not know the hospital from which the *Therapeutikai* came, we have no such charter.
38 Karas 1994.
39 Stannard 1984: 206.
40 It is possibly achor, or perhaps pityriasis.
41 By "simple" is meant a remedy containing only one ingredient, or only one active ingredient. Sixteen remedies are simples. Thirty-two have only two ingredients, of which one may be the medium for delivery of the active ingredient; for example, an oil may be a medium.
42 Daremberg 1853: 30–31 views the *Salt* text as separate from the *xenôn* remedy text, but it persists in all but two of the manuscripts considered here (Athos Iviron 151 and Paris, *graecus* 2229). See also Jeanselme 1930.
43 For the sole reference to bodily humours in the *xenôn* treatment text, see chapter 48, a recipe for emetics. It concludes with the observation that, after administration of the emetic, "thick chymes are vomited up" ("καὶ μετὰ ὥραν νεμοῦνται παχεῖς χυμοί").
44 Chapters 68–70 (the antidotes) are found in the codices Athos Iviron 151 and Paris, *graecus* 2236.
45 The charitable impulse has its own underlying sources. See Horden 2007b: esp. 69–71.
46 The title implies a conformity to a policy in the words "κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος" ("according to the defined procedure of the *xenon*").
47 Riddle 1974: 159.
48 See, for example, the cases of the emperors Alexios I Comnenos reported by his daughter Anna, and Constantine IX recorded by *Psellus*, *Chronographia*, VI.128 (ed. and Fr. tr. Renauld 1926–28: 2.32; Engl. tr. Sweter 1953: 165): ἤρξατο μὲν οὖν τὸ κακὸν οὐκ ἀθρόον εὐθύς, ἀλλ᾽ οἱ πόδες πρότερον τὴν τῶν ῥευμάτων ῥύμην ὑπήνεγκαν. On Psellos' references to Constantin IX's health, see Volk 1990: 395–404.
49 Edition and translation in Crisafulli and Nesbit 1997.
50 As already mentioned, these scholar-physicians are Oreibasios, Aetios, Alexander of Tralles, and Paul of Aegina.
51 Riddle 1974: 172.
52 *Ibid.*, 1974: 171n59.
53 Horden 2006: 64.
54 On prognosis, see *Corpus Hippocraticum*, *Praenotiones*, 1 (ed. and Fr. tr. Littré 1839–61: 2.110–113; ed. and Engl. tr. Jones 1923: 6–9).
55 *Vita S. Lucae Stylitae*, § 23–24 (ed. Delehaye 1923: 217–20). See also Miller 1985: 150–151.
56 See Horden 1982: 12.
57 *Ibid.*: 11–12. See also Kazhdan and Epstein 1985: 155–158. In the time in which this study places the *Therapeutikai*, there appears to have been a rapprochement among adherents of miracle-working saints and those supportive of medicine. The earlier literature of a hagiography that set out to prove the superiority of the healing powers, by divine means, of saints over those of physicians was diminishing.
58 See Miller 1984: 58–59.
59 The present-day distinction between surgeon and physician scarcely existed at the time of the *Therapeutikai*'s compilation, although personal specialisation by an individual physician might occur.
60 In contrast to the *Prostagai* text, there are only two references to fevers, in the chapters πλευριτικά (chapter 21) and εἰς τὰ ῥίγη · λέγω δὴ ἀφ᾽ ἡμερινόν . . . (chapter 47).
61 See chapter 56.
62 Talbot 1984: 267. In general, life expectancy is not likely to have altered between the Middle and Late Byzantine period.
63 *Soranus*, *Gynaecologia*, ed. and Fr. tr. Burguière et al. 1988–2000. Engl. tr. Temkin et al. 1956.

64 Book 9 of his *Libri medicinales*, ed. Olivieri 1935.
65 On Metrodora, see Touwaide 2006. For the Greek text of the work, see Kousis 1945. It is attested only by the *Florentinus Laurentianus* 75, 3 (on which see Bandini 1764–70: 3.141–142). It is probably worth noting that the Florentine manuscript is of Southern Italian origin (Calabria-Campania) (Cavallo 1980: 170, 172, and Ieraci Bio 1989: 190–191). For a study of the work, Congourdeau 1993.
66 Home birth was the general practice in Byzantium, so accounting in part for the lack of reference to obstetrics in remedy texts. Complications at birth were a matter for skilled midwifery, successful or not.
67 See, for example, *Paulus Aegineta*, *Epitome medicinae*, 3.6–17 (Heiberg 1921–24: 1. 144, l. 3–158, l. 25; Engl. tr. Adams 1844–47: 1. 359–391). Although not strictly applicable to these affections, see also Dols 1985: 135–148, especially references to *xenônes*.
68 The distinction between the practice of surgeon and physician was effectively absent at this time.
69 Riddle 1985: xx–xxi.
70 *Ibid.*: xix.
71 "τὸ σκοτωματικὸν πάθος συνίστατη ἀπὸ ψυχροῦ, καὶ γλίσχρου χυμοῦ, καταλαβόντος τὸν ἐγκέφαλον, ἢ ἀτμῶν θερμῶν καὶ δριμέων . . ." (ed. Bernard 1794: 1.142–145).
72 About prognosis in ancient medicine, see, for example the discussion of Hippocrates' *Prognosticon* in Jouanna 1992: 145–159 (English translation: Jouanna 1999: 100–111).
73 *Paulus Aegineta*, *Epitome medicinae*, 3.46 (ed. Heiberg 1921–24: 1. 249, ll. 22–24): "καὶ γὰρ ἀτονίαις καὶ φλεγμοναῖς ἐρυσιπέλασί τε καὶ σκίρροις καὶ ἀποστήμασι καὶ ἕλκεσι καὶ ἐμφράξεσιν ἁλίσκεται". Engl. tr. Adams 1844–47: 1. 560: "for it is subject to atony, inflammation, erysipelas, scirrhus, apostemes, ulcers and obstructions".
74 On chronic headache, see *Aretaeus*, *De causis et signis diuturnorum morborum*, I.2 (ed. Hude 1958: 36, l. 19–37, l. 23; Engl. tr. Adams 1856: 294–295). This chapter opens with a definition of − and differentiation between − acute and chronic headache.
75 *Theophanes Chrysobalantes*, *Epitome de curatione morborum*, 10 (ed. and tr. Bernard 1794: 53–55).
76 *Nikolaos Hieropais*, *Capitula medica*, 3 (eds. Tselikas and Ilioudis 1997: 2–3) and also the chapters [2]–[5] from manuscript *Sinaiticus* 1848 (*ibid.*: 86–87).
77 *Dioscorides*, *De materia medica*, 2.179, § 2 (ed. Wellmann 1906–14: 1.249, ll. 9–10: ". . . πρὸς τὰ χρόνια τῆς κεφάλης ἀλγήματα . . ."; Engl. tr. Beck 2005: 171).
78 See for example, *Galenus*, *De differentiis febrium*, 13 (ed. Kühn 1821–33: 7.380, ll. 5–6).
79 *Paulus Aegineta*, *Epitome medicinae*, 3.4 (ed. Heiberg 1921–24: 1.137, l. 15–140, l. 28; Engl. tr. Adams 1844–47: 1.350–352).
80 Id. 3.5 (ed. Heiberg 1921–24: 1.141, l. 1–144, l. 2; Engl. tr. Adams 1844–47: 1.355–357).
81 For 3.5 he relies largely on *Galenus*, *De compositione medicamentorum secundum locos*, 3 (ed. Kühn 1821–33: 12.599–695).
82 ἡμικράνιον (*hêmikranion*) is broadly synonymous with ἡμικρανία (*hêmikrania*), ἡμίκρανον (*hêmikranon*) and ἡμίκραιρα (*hêmikraira*). That is to say, whilst the literal meaning is "half the head or face", it also bears the meaning of "pain on one side of the head". The explanation for the combination of the terms lies with Paul of Aegina who says of those whose head pain is exacerbated by various external sources (*Paulus Aegineta*, *Epitome medicinae*, 3.5 [ed. Heiberg 1921–24: 1. 141, ll. 4–6]: " . . . δοκοῦσί τε πλήττεσθαι τὴν κεφαλήν, οἱ μὲν ἅπασαν, οἱ δὲ κατὰ θάτερον μέρος, οὓς καὶ ἡμικρανικοὺς ὀνομάζουσι" (Engl. tr. Adams 1844–1847: 1. 345). The chapter περὶ κεφαλαίας καὶ ἡμικραίρας (*peri kephalaias kai hêmikrairas*) of Paul of Aegina (= 3.5) is largely derived from Galen (*Galenus*, *De compositione medicamentorum secundum locos*, 2.2 [ed. Kühn 1821–33: 12.561. l. 16–565, l. 15). See also *Oribasius*, *Ad Eunapium*, 4.1–3 (ed. Raeder 1926: 436–439).

83 Paul of Aegina died after 642 A.D. See Touwaide 2007b: 635.
84 On ophthalmology in Antiquity and Byzantium, besides the classical work of Hirschberg 1899 (English translation 1982), see now Nielsen 1974, Savage-Smith 1984, Andersen 1994, Marganne 1994 and Lascaratos 1999. A short study on ophthalmology in Byzantine *xenônes* can be found in Lascaratos and Marketos 1991.
85 See Adamson 1988: 204–209.
86 The nematode is possibly the fiery serpent of the Old Testament. See *Numbers* XXI, vv. 6–9.
87 Ullmann 1978: 81–83.
88 Edition by Kühn 1821–33: 11.379–12.377.
89 *Alexander Trallianus*, *Therapeutica*, 3.7 (ed. and Germ. tr. Puschmann 1878–79: 2.109, ll. 30–31; Fr. tr. Brunet 1933–37: 3.83).
90 See Paul of Aegina's introduction to his *Epitome medicinae* (ed. Heiberg 1921–24: 1.3–4) for his summary of the history of medicine in the *Prooemium* and 7.1 (ed. Heiberg 1921–24: 2.185; Engl. tr. in Adams 1844–47: 3.1–2) for the chapter on the discovery of drugs properties, entitled: περὶ τῶν ἀπὸ τῶν γευστῶν ποιοτήτων δηλουμένων κράσεων.
91 Eftychiadis 1983b: 257–258.
92 For the simples, see *Paulus Aegineta*, *Epitome medicinae*, 7.3 (ed. Heiberg 1921–24: 2.186, l. 22–274, l. 22; Engl. tr. Adams 1844–47: 3.17–480). For the compound ones, see ibid. 7.5–24 (ed. Heiberg 1921–24: 2.280, l. 16–401, l. 4; Engl. tr. Adams 1844–47: 3.493–603). Compounds are ἱερά, liniments, emetics, trochisks, unguents, collyria, plasters, ἄκοπα, δρώπακες, sinapisms, oils, οἰνανθάρια, κῦφι and pessaries. There is a certain poetry in these names, and in the names of the preparations themselves (διοσπολίτης, ἡ Ζωπύριος, ἡ παιονία for example).
93 See, for example, ζηλόφυλλον (*zêlophullon*, chapter 31 [νεφριτικά], with the variant reading ζηνόφυλλον), θασόγαλα (*thasogala*, chapter 48 [ἐμετικά]), ὁμοκῦκλα (*homokukla*, chapter 57 [ἀναργαργαρισμοί]) and πυτίκιον (*putikion*, chapter 46 [εἰς πύρωμα], with the variant readings πιτύκιον, πιτύκην and πιτύκιν). The difficulties of identification are compounded by the long chain of transmission, the lack of a unified plant nomenclature and phonetic changes (e.g. ζόγγος for σόγγος, the sow thistle, in chapter 47).
94 Spices and imported plants and materia medica are the following (alphabetic order of Greek names): ἀλόη (*aloê*), ἀμμωνιακόν (*ammôniakon*), γαλαγγά (*galanga*), ζαδοάρ (*zadoar*), ζίζιφα/ζίζυφα (*zizipha*/*zizupha*), κινάμωμον (*kinamômon*), κόστος (*kostos*), κουτζούβριν (*koutzoubrin* = στυράκιον [*sturakion*]), κρόκον (*krokon*), κύμινον (*kuminon*), λίβανον (*libanon*) with δενδρολίβανον (*dendrolibanon*) and θυμίαμα (*thumiama*, synonym of *libanon*), νάρδος (*nardos*) and ναρδόσταχυς (*nardosatachus*), ξυλοβάλσαμον (*xulobalsamon*), πέπερι (*peperi*), πιστάκια (*pistakia*), σαγάπηνον (*sagapênon*), σμύρνα (*smurna*), στυπτηρία σχιστή (*stuptêria schistê*) and χαλβάνη (*chalbanê*).
95 Nutton 1985: 141–142, and Kazhdan et al. 1991: 3.1937–1938 (A. Laiou).
96 See Stannard 1984: 207, who says of the plurality of recipes for the same complaint: "The conclusion that *we* would reach, viz. that such a sequence of remedies was a virtual admission that none was predictably reliable, was apparently not drawn."
97 *Dioscorides*, *De materia medica*, 2.35 (ed. Wellmann 1907–14: 1.133; Engl. tr. Beck 2005: 103, who translates "ὄνοι οἱ ὑπὸ τὰς ὕδριας" as "wood lice", whereas the brief description provided by Dioscorides and the illustrations in manuscripts suggest rather that it is the millipede).
98 See Adams 1844–47: 3. 277.
99 Maguire 1995.
100 Edition by Zipser 2009. For a discussion of the office of *archiatros*, see Horden 2006: 64–65 and 67.

101 For the tradition of the text, see Zipser 2009: 13–27.
102 Daremberg 1853: 27.
103 Kousis 1929: 375–382.
104 Kousis 1928.
105 Hunger 1978: 2, 310 and 314.
106 Eftychiadis 1983b: 301.
107 Miller 1985: 174.
108 Zipser 2009.
109 On this manuscript, see Hardt 1806–12: 5.378–404, especially 403.
110 Faith Wallis 1995: 116, notes that incremental explanations ("additions of detail to instructions for preparing a medicament") were not uncommon when remedies were borrowed.
111 Manuscripts *Londinensis*, Add. 5119, and *Venetus Marcianus*, *appendix graeca* XI, 21 (coll. 453) mentioned above.
112 Zipser 2009: 9.
113 Sonderkamp 1987: 176–178, and 181–183.
114 *Ibid.*, 176.
115 Constantine was the dedicatee of two of Theophanes medical treatises: the *Epitome de curatione morborum* (see Bernard 1794: 1.4–5) and *De alimentis* (unpublished).
116 "Vor allem deshalb, weil das Antidotarium Xenonis inhaltlich weitgehend eine Dublette zu *De curatione* darstellt . . . ". Sonderkamp 1987: 62. *Duplicate copy* seems to be an appropriate translation of *Dublette* here.
117 For example, the fourteenth-century manuscript *Florentinus Laurentianus* 7, 19 is matched closely by the sixteenth-century codex *Monacensis graecus* 105 in its textual readings and the order in which Theophanes Chrysobalantes' works appear in each manuscript. The codex *Parisinus graecus* 2091 is the least reliable text, having major lacunae. The variants within the manuscripts are, however, relatively few and confined largely to the inclusion or exclusion of certain remedies.
118 These manuscripts include the codex *Parisinus graecus* 2194 in which the *Therapeutikai* is represented only by chapter 1 at f. 441r, ll. 5–6.
119 Jeanselme 1930: 167.
120 *Vaticanus graecus* 299, f. 305r, l. 29-v, l. 1.
121 *Vaticanus graecus* 299, f. 306v, ll. 21–23.
122 *Dioscorides*, *De materia medica*, 2.179 (ed. Wellmann 1906–14: 1.248–250; Engl. tr. in Beck 2005: 171–172).
123 See 2.3 (ed. Kühn 1821–33: 14.399, ll.15–16) and 3 πρὸς ἡμικρανίαν (*ibid.*: 14.500, ll. 11–12).
124 *Paulus Aegineta*, *Epitome medicinae*, 3.4, § 3 and 7 (ed. Heiberg 1921–24: 1.138, ll. 13–16 and 140, ll. 6–15, respectively; Engl. tr. Adams 1844–47: 1.350 and 352 respectively).
125 *Galenus*, *De simplicium medicamentorum temperamentis et facultatibus*, 7, 29 (ed. Kühn 1821–33: 12.29–30).
126 *Theophanes Chrysobalantes*, *De curatione morborum,* 14 (ed. Bernard 1794: 66–71, especially 66, l.6).
127 In modern herbal medicine, English ivy has been used, both externally and, more rarely, internally with caution (see, for example, Hocking 1997: 363, *sub nomine Hedera helix* L.; Vermeulen 1998: 143; van Wyk and Wink 2004: 167). For its use for the treatment of headache and a pharmaco-chemical evaluation, see Mandale et al. 2010.
128 Riddle 1974: 159.
129 *Vaticanus graecus* 299, f. 393v, ll. 4–10.
130 *Vaticanus graecus* 299, ff. 344v, l. 13–345r, l. 12.
131 *Vaticanus graecus* 299, f. 422v, ll. 15–29 for the whole remedy and 15–16 for the title including this reference to a teaching activity.

132 See, for example the note in the codex *Vaticanus graecus* 282, f. 437r, by the physician who records a pill for bleeding gums mentioned above. He adds two more remedies, the last of which he acquired "from a certain physician of the Latins, called Mesué".
133 Chapter 35 in Martius 1568: 43–44. It is not present in the edition by Bernard 1794.
134 *Vaticanus graecus* 292, f. 208v, ll. 3–23.
135 *Florentinus Laurentinaus* 75, 19, ff. 96r, *in margine ad l.* 22 (Γαληνοῦ). Also f. 97r, *in margine ad l.* 3 (τοῦ αὐτοῦ, that is, Paul) and *in margine ad l.* 22 (ἑτέρου).

5 On the symptoms of acute and chronic affections

Romanos, Theophilos and the *Prostagai*

> Combien de fois le chercheur en quête d'un fait nouveau a-t-il cru le découvrir enfin dans quelque passage d'un manuscrit! Combien de fois son espoir a-t-il été déçu, car il n'a pas tardé à retrouver la source ancienne où le prétendu fragment original avait été copié presque mot pour mot.
>
> Edouard Jeanselme,
> "Sur un aide-mémoire de thérapeutique byzantin . . . ,"
> 1930: 170

Two hitherto unrelated texts, one attributed to the medical writer Romanos and the other to an unknown Theophilos, together form a single work. The joining of the texts makes a single collection of remedies (Table 5.1).

The manuscripts in which each part of the work is to be found are the codex *Vindobonensis medicus graecus* 48, ff. 1r–42v, containing the major portion of the text explicitly attributed to Romanos, and the codex *Florentinus Laurentianus* 75, 19, ff. 82v–149r, in which are copied the later chapters of the compilation of an unknown Theophilos, a name that is almost certainly a fiction. It is these two manuscripts, one of the thirteenth and the other of the fourteenth century, that overlap and thus share a common portion of text, so allowing the unification of the work.

The Laurentian codex, in contrast to the Viennese one, has a brief title that records, *inter alia*, that it had been compiled from various *xenôn* books (ἐκ διαφόρων ξενονικῶν βιβλίων).[1] This phrase may be construed to mean a compilation from medical textbooks used in *xenôn* practice. Thus, the unified text is, as Romanos makes clear in his prooemion, a compilation from earlier writers.[2] These include Hippocrates, Galen, Aetius, Paul (unspecified, but in one instance unidentifiable with the corresponding text of either Paul of Aegina or of Nicaea), Cosmas Actuarius, Theon and Maximos the Confessor. Leo and Meletios the Monk are also used without any attribution. Ugo Criscuolo demonstrates affinities of Romanos with Theophanes Chrysobalantes, Aetius, Paul of Aegina and Leo in the text of some of the earlier chapters on cerebral pathologies.[3]

Table 5.1 Author, title and *incipit* of Romanos' and Theophilos' texts

	Romanos, De morbis acutis et chronicis	*Theophilos,* Apotherapeutikê
Manuscript	*Vindobonensis medicus graecus* 48, f. 1r, ll. 1–3	*Florentinus Laurentianus* 75, 19, f. 82v, ll. 13–15
Author	Ρωμανοῦ κουβουκλησίου τῆς τοῦ Θεοῦ ἁγίας καὶ μεγάλης Ἐκκλησιας πρωτομενυτοῦ τοῦ βασιλικοῦ ξενῶνος τοῦ Μυρελαίου ἤτοι τῆς Περιδόξου (The book of) Romanos, *koubouklêsios* of the Holy and Great Church of God (and) *protomenutês* of the Royal hospital of the Myrelaion consecrated to the Virgin.	
Title		ἀρχὴ σὺν Θεῷ τῆς ἀποθεραπευτικῆς συλλέξαντος ταύτην, ἐκ διαφόρων ξενωνικῶν βίβλων. With God's help, the beginning of the *Apotherapeutikê* of Theophilos who compiled its contents from various hospital books.
Incipit	περὶ τῶν ὄξεων καὶ μακρῶν νοσημάτων	

Table 5.2 Manuscripts of Romanos' and Theophilos' texts[4]

***MSS containing part of Romanos,* De morbis acutis et chronicis**		
MSS	*Century*	*Folios*
Ambrosianus H 49 sup.	14th (beginning)	7v–14r
Vaticanus graecus 280	14th	162v–169r
Vindobonensis medicus graecus 48	13th (2nd half)	1r–42v[5]
***MS containing Theophilos,* Apotherapeutikê**		
Florentinus Laurentianus 75, 19	14th	82v–149r

A unified text?

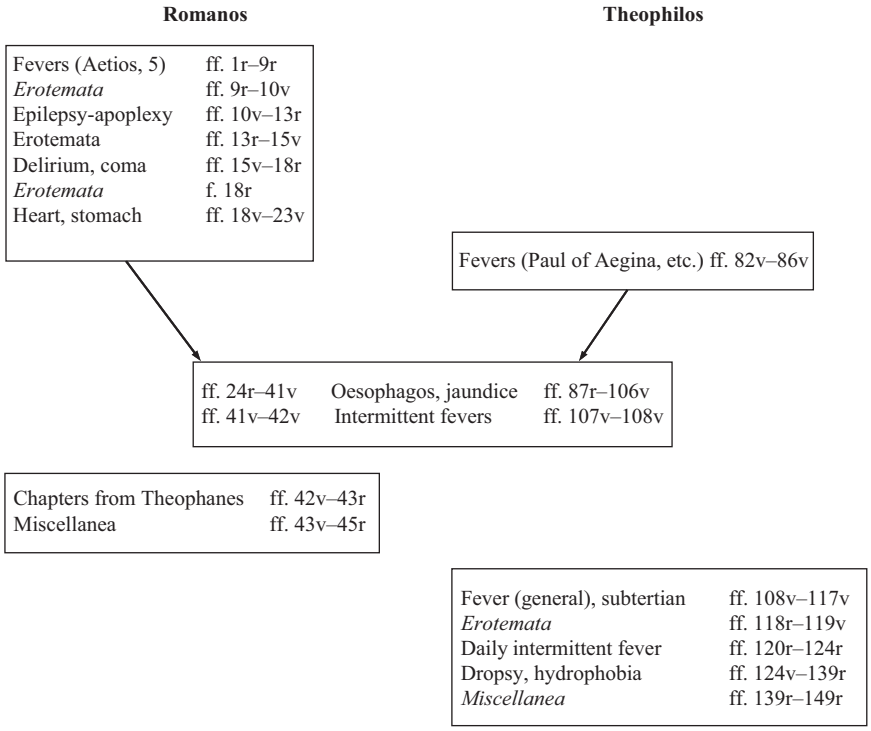
The medical texts of Romanos and Theophilos have hitherto been studied separately. On closer examination, a substantial passage common to the last folios of Romanos, *De acutis et chronicis morbis* in codex *Vindobonensis medicus graecus* 48, and to the opening folios of Theophilos' *Apotherapeutikê* in codex *Laurentianus* 75, 19, is discoverable.[6]

The *Vindobonensis*, in part on parchment and in part on oriental paper with quires whose proportions vary widely, is dated to the second half of the thirteenth century,[7] and the *Laurentianus* to the fourteenth.[8] There seems no reason to doubt the dating of the Laurentian codex; that of the Vienna codex has the authority of Herbert Hunger, though considered by Daniel de Nessel (1644–1689) to be of the fourteenth century,[9] and assigned to the fourteenth/fifteenth in Diels' catalogue.[10]

Each copy is probably several removes from the original texts of which no other copies have been found, save a fragment of the Romanos text in the codex *Vaticanus graecus* 280, ff. 162v–169r.[11]

Once the texts of Romanos and Theophilos are joined, and the overlapping portions are made one, a single coherent text is formed (Table 5.3). This text in turn is the repository of what we shall call the *Prostagai passages* (*Prasecriptiones medicae* or *Prescriptions*), so designated after the text entitled Προσταγαὶ καὶ τύποι (*Prostagai kai tupoi*) that we analyse below.

Table 5.3 Romanos' and Theophilos' unified text



Diagrammatic representation of the text in codices *Vindobonensis medicus graecus* 48, ff. 1r–45r, and *Florentinus Laurentianus* 75, 19, ff. 82v–149r, showing the conjectured schema of a common text derived from Romanos, περὶ σημείων καὶ χρονίων παθῶν, and Theophilos, ἀποθεραπευτική.

Romanos, *De acutis et chronicis morbis*

The prooemion to Romanos' work is both descriptive and vigorous:[12]

> οὐ παραιτητέον ἡγησάμην ὅπως οἱ περὶ τὰς ῥύμας καὶ τὰς παρεμβολὰς περιπατοῦντες διὰ τὸ μὴ δύνασθαι αὐτοῖς βαρέα φορτία βαστάζειν ἐν τῇ ὁδῷ, καὶ διὰ τοῦτο περὶ τῶν ὀξέων καὶ μακρῶν νοσημάτων τοῦτο τὸ βιβλίον βραχέως καὶ συντόμως πεποίηκα · ἅπερ αὐτὸς ἑώρακα καὶ ἐγγεγύμνασμαι τῇ διδασκαλίᾳ τῶν ἀρχαίων περὶ σημείων ὀξέων καὶ χρονίων παθῶν μικρότητι παρέδωκα τὴν διδασκαλίαν. οὐκοῦν δέον ἡμῖν ἐστι μέλλοντας διδάξαι ἐπικαλέσθαι Χριστόν, τὸν ἀληθινὸν Θεὸν ἡμῶν, ἀρωγὸν καὶ ὁδηγὸν γενέσθαι εἰς τὴν τοιαύτην διδασκαλίαν, ὅπως δυνηθῶμεν ἀνελλιπῆ καὶ ἀνυστέρητον ταύτην ἀποτελέσαι. χρῆ οὖν ἡμᾶς πρότερον ὁρίσθαι περὶ πυρετῶν διαγνώσεως καὶ θεραπείας, τί εστι πυρετός.

In summary, its compiler, Romanos, had in mind those practising medicine who could not carry around with them weighty medical reference books. Consequently, he says, he has prepared a synopsis of all these books on both chronic and acute ailments that his experience as a teacher has suggested. He goes on to say that physicians must not, however, overlook God's guiding hand in their work.

The fragment in codex *Vaticanus graecus* 280, ff. 162v–169r contains only the prooemion and some initial chapters on fever from Book V of Aetius, *Libri medicinales*.[13]

Little is known about Romanos. The prooemion records that he was κουβουκλήσιος (*koubouklêsios*) of the Holy and Great Church of God (Χριστοῦ τοῦ παντοκράτορος, *Christou tou Pantokratoros*),[14] and πρωτομενυτής (*protomenutês*) at the Myrelaion Hospital in Constantinople, a hospital consecrated to the Virgin Mother and re-founded by the emperor Romanos Lekapenos (emp. 920–944) in the early tenth century.[15] The office of *koubouklêsios* appears to have been established at some time in the tenth century, but also to have been relatively short lived; no reference to it is found in the records after the latter part of the eleventh century. Reference to the office of *protomenutês* is not found elsewhere. On the view that the office of the *koubouklêsios* is no longer recorded in the sources after the tenth century, Romanos' *floruit* is usually placed in that century.[16] Ugo Criscuolo proposes that the *protomenutês* is the office of a senior physician that implies experience and training in the teachings of earlier medical writers about acute symptoms and chronic diseases.[17] These are Romanos' credentials for writing this introductory narrative.

Although the authenticity of a title or prooemion in a work of this kind always needs a critical examination, the circumstantial evidence of the offices Romanos held, and where he held them, appears convincing in its detail. For example, as the office of *koubouklêsios* was relatively short lived, it seems unlikely that a spurious prooemion would have cited it for a fictitious physician. It is, furthermore, undeniable that Romanos does in the work exactly what he says he will do in the prooemion. Yet the relatively lengthy passage from Aetius that follows the prooemion

divorces the passage and the title from the structured work that follows, despite Romanos' introductory sentence that he is going to discuss fevers and their treatments.[18] The fevers passage is, however, out of place if the schematic chapters on fevers later in the unified text are taken into account (see Table 5.3). Either it is an interpolation, the significance of which is uncertain in terms of the authenticity of the introductory passage, or there should be no expectation that an early mediaeval work be kept in perfect order in transmission. If it is an interpolation, it need not invalidate the authenticity of the prooemion.

Romanos' work is compiled from earlier medical writers to whom occasional attributions are made in the text. Ugo Criscuolo has also demonstrated the often very close correspondence of some passages in the Romanos manuscript to works by Leo the Iatrosophist and Theophanes Chrysobalantes of the ninth and tenth centuries respectively.[19] This kind of affinity must, however, be treated with caution because it could reflect the independent use of a common source rather than a borrowing by Romanos. All the sources, however, support a *terminus ad quem* for Romanos of the tenth century.[20]

The part that the language of the work plays in dating its composition is ambiguous, partly because there may have been changes during transmission, and partly because of the possibility of modification in a compilation of passages from earlier writers. The κομίδιν σαρακηνικόν (*komidin sarakênikon*) suggests a contemporary remedy.[21] A remedy in the part of the unified text attributed to Theophilos uses later phytonyms.[22] This example may show traces of orthographical modernisation or reflect "that later form of language that was very much closer to the spoken norms of (the later Middle Ages)".[23] Ugo Criscuolo bases one of his arguments for ascribing Romanos to the tenth century on details of vocabulary usage at that time.[24]

The structure of the text, after the fever chapters of Aetius,[25] is made up of discrete sections on related medical topics interspersed by *erotemata* – that is, rhetorical questions. These provide a useful, and for didactic purposes, easily memorable access to the chapters where they are used. But *erotemata* that introduce clinical subjects are less easy to fit into the schema. For example, in answer to the question "How many vocal organs are there?", the response is "six: uvula, larynx, trachea, bronchial tube(s), lungs (and) chest". [26] This topic is not, however, developed elsewhere in the unified text.

The *Apotherapeutikê* of Theophilos

The text of Romanos appears to stand alone in the Vienna codex *medicus graecus* 48 as the sole work attributable to this writer, albeit that there is a short fragment in Vatican codex *graecus* 280. There is, however, an equally well-known text in the codex *Laurentianus* 75, 19 that serves to complete the work of Romanos, sharing a conspicuous portion of its contents and providing its conclusion. This text is usually referred to as the *Apotherapeutikê* of Theophilos.[27]

That the conjunction of these two texts seems to have passed unnoticed in the literature is perhaps puzzling. That we have no continuous manuscript copy of its contents is a loss. The *Apotherapeutikê's* separation from its counterpart and

its ascription to Theophilos cannot, however, be dismissed without discussion. It is very much as the mediaeval historian Sir Richard Southern said, that "fifty or a hundred years after the death of a notable man, false ascriptions were easily made, and even more easily accepted, by bibliographers".[28]

That the *Apotherapeutikê* of Theophilos was "collected from various hospital books (ἐκ διαφόρων ξενωνικῶν βίβλων, *ek diaphorôn xenônikôn biblôn*)" suggests the value that medical texts held in *xenôn* medical practice. Aristotelis Kousis saw the *Apotherapeutikê* as a compilation typical of "that period". He observes:[29]

> . . . the arrangement of the text is done so carelessly, that one can only conclude that the author had collected the text to form a basis for another more systematic work similar perhaps to those we encounter in his time or still earlier on (Paulus Nicaeus, Leo iatrosophist, Theophanes Nonnus etc.).

The meaning of ἀποθεραπευτική (*apotherapeutikê*) is not entirely clear. The word is an adjective; presumably τέχνη (*technê*) or βίβλος (*biblos*) needs be understood in the title. There is no evidence for the use of the word ἀποθεραπευτική (*apotherapeutikê*) in the sense that it appears to have here. In medicine it initially referred to the cure after the disease and then, says Kousis, "by extension to the entire therapeutic procedure".[30] Galen, however, uses the term ἀποθεραπευτικόν (*apotherapeutikon*) in reference to "after-care" as one of the branches of medicine.[31] We may speculate that the copyist supplied the title in each case; it may then follow that the copyist used the name of Theophilos in the belief that the text before him was, in fact, the work of the renowned Theophilos Protospatharios.

Anna Maria Ieraci Bio has described by categories that part of the text ascribed to Theophilos.[32] Much of it matches the material used in Romanos' work, the same medical writers being drawn on, and the same questions and answers (*erotapokriseis*) and definitions being present in each. There are, too, set phrases of teaching practice (understand, learn, we speak of, etc . . .). An anthology of texts relating to nourishment and digestion is included, and a *De sanguine*.[33] Anna Maria Ieraci Bio also notes that the compiler has in fact chosen his sources with care to provide, in places, definition and diagnostic description followed by one or more therapies.[34]

The issue of pattern and order is important in remedy-cum-diagnostic texts to allow easy access to their contents; it makes little sense if a text is not easy to use − a theme of Romanos' prooemion.[35] According to John Riddle, Dioscorides had ordered his *Materia medica* according to the properties of the drugs described.[36] The successor to that system was the arrangement of chapters in the alphabetical order of the drugs described.[37] While this had advantages, there was some loss of information that the structure of Dioscorides' *De materia medica* had provided. It came to be replaced, therefore, by the listing of drugs and their substitutes (ἀντιβαλλόμενα, *antiballomena*),[38] or by a taxonomy based on the locus of the affection, usually in the order *a capite ad calcem*, a schema easy to understand and comprehensible for most subject headings.[39] But the reader who

consults any alphabetical work must from time to time anticipate that his search may not be under the heading that he expects. The *a capite ad calcem* order, in practice, imposes a constraint on a treatise that attempts brevity. Theophanes Chrysobalantes not only used the order successfully but overcame, for the most part, the problem of placing in the text the single pathology that affects several parts of the body. In the unified text of Romanos/Theophilos (see Table 5.3) the presumed *locus* of the affection is the key to description of treatment. After the chapters from Aetius and the *erotapokriseis* with which the unified text begins are chapters on affections of the mind followed by fevers by type.[40] Thereafter come what are largely external affections,[41] corresponding to Aetius' Book IV[42] and then a group of miscellaneous chapters, corresponding to some extent to Paul of Aegina, Book I.[43] There are a few anomalies in this order, but the general principle holds good.[44] It is through this schema that Romanos can rightly claim, "I have written this little book briefly and succinctly" (τοῦτο τὸ βιβλίον βραχέως καὶ συντόμως πεποίηκα).

The compiler

Who, then, was the compiler, Romanos or Theophilos? The prooemion describing the credentials of Romanos carries conviction when applied to the unified text, but there is no other evidence for the person of Romanos. The brief heading attributing to Theophilos' authorship of the *Apotherapeutikê* is simply factual. Of the authorship, Herbert Hunger remarks in a footnote, "The question of the author remains open."[45]

A text in the codex *Scorialensis* Σ.III.17, an otherwise unremarkable Byzantine medical manuscript of the fifteenth century written in several hands,[46] offers double-edged evidence for and against the slightly better known Theophilos Protospatharios as compiler.[47] It contains Theophilos, *De arte medica, ex Hippocrate et Galeno*,[48] and is one of the only two manuscripts in which this work appears.[49] The judgement is finely balanced. The assignment of the *floruit* of Theophilos Protospatharios to somewhere between 850 and the tenth century is not far off that of Romanos calculated from the offices that he held. It is possible that either could have compiled the unified text. The argument for Romanos as compiler, however, is twofold, though lacking specific factual evidence. In the first place, it can be argued that the title and prooemion of Romanos' work is sufficiently elaborate to support its authenticity. In contrast, the title of the Theophilos text is comparable to the many formulaic, and sometimes spurious, titles encountered in Byzantine manuscripts. It is quite possible that a late copyist, seeking to entitle an otherwise unidentifiable part-text, would manufacture a description of this kind. There is also an argument that the reference to *xenôn* books is specific and not formulaic. The second part of the argument is that the compilation, in whole or in part, is not of a kind with the other medical works attributed to Theophilos Protospatharios.[50] There are treatises on specific medical topics of a higher order of writing, it must be supposed, than the assembly of a compilation.

There intrudes in this discussion the question of a religious or monastic provenance for the Laurentian *Apotherapeutikê* argued by both Aristotelis Kousis and Anna Maria Ieraci Bio.[51] The evidence is slight, the argument of both scholars resting on the inclusion of an aphorism of St Athanasius at its conclusion.[52] The argument of Kousis additionally relies on his assertion of "a Christian tone that permeates [the] treatise".[53] This is hard to identify, unless in the formulaic opening of the title "with God's help", which Kousis accepts is common enough in texts of this period. The reference to holy water as a recipe ingredient is no indicator,[54] as the contents are not an original composition, and holy water appears as an ingredient in recipes in more than one remedy text. Kousis also proposes that Theophilos used the books of the *xenôn* of a monastery and that he was a monk.[55] He gives no supporting evidence. The speculation of the two scholars about the *Apotherapeutikê* portion of the unified text lacks conviction and now tends to support Romanos as the compiler.

A religious provenance for the text is better supported by the conclusion of Romanos' prooemion as well as by his office of *koubouklêsios* of the Holy and Great Church.[56] In truth, however, a religious provenance is less significant in the context of this study than the *xenôn* association implicit in the title of the Romanos text. Romanos speaks in his prooemion of the highways and byways of medicine. If this is a metaphor, it implies that the text is a source of reference that lifts the burden of searching the texts of the earlier medical writers. It can be imagined that this would be welcome in a *xenôn* where the availability of books was perhaps limited. The "various xenôn books" (διαφόρων ξενωνικῶν βιβλίων, *diaphorôn xenônikôn bibliôn*) in the *Apotherapeutikê* title is evocative of searching the sources.

Assembling the text

Why is our inheritance of the Romanos/*Apotherapeutikê* text confined to two manuscripts alone? Even allowing for its likely value to lay as well as medical users, the work of Theophanes Chrysobalantes has come down to us in over one hundred manuscripts.[57] Almost certainly, *xenôn* remedy texts were costly and time consuming to copy, especially those texts whose use was limited principally to physicians or even, and especially, lay users; the cost of a copy prepared by a professional scribe would be obviated by a user making his own copy.[58] The proportion of medical texts in private ownership and in institutional possession at any time in Constantinople is unknown and unknowable, but the balance is probably in favour of institutional ownership where books can more often become worn, discarded or lost than in private use.

What then happened to so potentially useful a *vade mecum* as that of the Romanos/*Apotherapeutikê* text that it survived in only two manuscripts, one of which was without its end, and the other its beginning? Why does the *Apotherapeutikê* begin mid-text under cover of an apparently spurious title, and

Table 5.4 Contents of codex *Vindobonensis medicus graecus* 48

Folios	*Author*	*Title*
1r–42v	Romanus	*De morbis acutis* etc.
42v–43r	Theophanes	*Epitome* (excerpts)
43v–46r	Anonymus	*Lexicon botanicum* (excerpts)
46r–60v, 62r–114r, 126v–164r	Galenus	*De simplicium medicamentorum temperamentis et facultatibus*
114r–119v	Galenus	*De theriaca*
120r–125v	Paulus Aegineta	*Epitome* (excerpts)
164v–171v	Galenus	*De antidotis*
172r–187v, 189r–196r	Hippocrates	*Aphorismi*
188r–v	Anonymus	*Remedia*
196v	Anonymus	*Vini*
197r–236v	Paulus Aegineta	*Epitome*

why does the copyist of the Vienna codex break off part way through copying the Romanos text? The copyist of the *Apotherapeutikê* may only have had a disbound and part text as his exemplar, but so too may the copyist of the Romanos text. That coincidence seems too good to be true, but the problem can be approached in another way. The predominant content of the codex in which Romanos' text is copied is almost entirely one of remedy texts (see Table 5.4).

Such content is consonant with, but not necessarily supportive of, Ugo Criscuolo's assertion that there is no certainty that Romanos' treatise finished at f. 46r.[59] Criscuolo goes on to say that it is very likely that the subsequent folios form its continuation, just as the long citation from Aetius constitutes its opening. This view is at odds with the conjecture of the unified text and its structure, and is countered by the contrast between the attributed writers quoted in the unified text (see Table 5.5) and those copied from f. 46r to the end of the codex, confined to Hippocrates, Galen and Paul of Aegina (see Table 5.5).

The Vienna codex is a "Medizinische Sammelhandschrift" (as Herbert Hunger puts it)[60] of which the Romanos text is simply one part. Circumstantial evidence for this lies in two references to chapters:[61]

> ζήτει περὶ ἐπιλειψίας κεφαλαίῳ ρε΄
> and
> θεραπεία μανίας ζήτει ἐν κεφαλαίῳ λβ΄

They suggest that there was a single exemplar used by the copyist of the Vienna codex that had numbered chapters. That would imply that these phrases were

Table 5.5 Sources of citations in the unified text

Aetius	5	Kosmas aktouarios	1
Alexander of Tralles	2	Paul of Aegina	7
Archigenes	1	Paul of Nicaea	3
Athanasios	1	Plato	1
Dioscorides	1	Romanos	1
Galen	12	St. Maxim	2
Herodotos medicus[1]	1	Stephanus[3]	1
Hippocrates[2]	7	Theon[4]	1

1 Herodotos is the supposed first-century A.D. author of *Diagnostica de morbis acutis et chronicis*.

2 Aphorisms ascribed to Hippocrates are interspersed throughout the ἀποθεαπευτική, apropos of either what follows or what has gone before. Aphorisms are to be found at ff. 97v, 98r, 100r, 100v, 105v, 110v, 114v, 125r, 128r, 128v, 129v, 143r, 144r and 149r (three), making a total of sixteen.

3 The identity of Stephanus quoted here is uncertain, perhaps Stephanus, *archiatros* of the Mangana *xenôn*, but more likely Stephanus Atheniensis.

4 Theon (f. 105r) may be the second-century Alexandrian quoted by Galen, *De sanitate tuenda* (ed. Koch 1923: 44), or the fourth- or sixth-century *archiatros*, also of Alexandria, of whom a fragment is quoted in Photios, *Bibliotheca*, cod. 20 (ed. Henry 1959: 1:139–140).

automatically copied (the capital numerals ΛΒ΄ inexplicably occur at ff. 12r and 46r).[62] Yet the limitation of his text to two principal manuscripts contrasts remarkably with the numerous copies of the texts of Theophanes Chrysobalantes. This limited tradition may have had its origins in a confined circulation of the original text, or simply the vicissitudes to which mediaeval manuscripts have so often been subject since their copying.

The *Prostagai* passages

From the text of Romanos/*Apotherapeutikê*, we turn to a short text found in some manuscripts (see Table 5.6) that contains prescriptions most of which may be found in the Romanos text. It has, however, a unique heading that associates the contents with *xenôn* practice. Translating προσταγαί (*prostagai*) and τύποι (*tupoi*) has been based on context:[63]

> προσταγαὶ καὶ τύποι τῶν μεγάλων ξενόνων, ὅσα ἐκ πείρας ἰατρῶν παῖδες θεραπείας χάριν προσάγουσι · καὶ τοῖς ἄλλοις πῶς πάσχουσιν ἐν τοῖς ξενῶσιν.
>
> Prescriptions (*prostagai*) and formulae (*tupoi*) of the great hospitals, of the kind that from experience physicians use for the sake of healing, particularly for hospital patients.

Based on its title, this text is designed here as *Prostagai* (*Praescriptiones*, *Pescriptions*).

Byzantine medical manuscripts disclose no title or rubric quite like this; it is far from formulaic. All but three of its sixteen chapters with remedies for various

Table 5.6 Manuscripts of the *Prostagai* (whole text or fragments)

Century	*Manuscript*
14th in.	*Vindobonensis medicus graecus* 37, f. 83r–v (chapter 1 only)
14th	*Vaticanus graecus* 292, ff. 200r–210v, l. 25
	Venetus Marcianus V, 7 (coll. 1054), f. 90r
14th ex.	*Vaticanus graecus* 299, ff. 248r–255r, sequential order of chapters[64]
	Vaticanus graecus 299, chapters dispersed between ff. 255r–407v [65]
15th	*Parisinus graecus* 2236, f. 45v, col. 1, ll. 1–8 (chapter 1, fragment)
15th/16th	*Mediolanensis Ambrosianus* P 90 sup., ff. 93r, l. 16–105r, l. 7

affections are to be found in the unified text in either the Romanos-attributed portion or that of the *Apotherapeutikê* or both where the two portions overlap. Initially, it seems reasonable to suppose that the contents of the *Prostagai* text therefore pre-dated Romanos, but it could equally be that it was an anthology of useful excerpts from a source available to Romanos and other physicians. There is an indication of its utility in two fourteenth-century manuscripts, the codices *Vaticani graeci* 292 and 299.[66] In codex 292 the sixteen chapter heads are set down as a continuous text over eleven folios. In codex 299 there are two copies of the *Prostagai*: the first (ff. 248r–255r) is written as a continuous text; the second is dispersed among ff. 255r–407v.

The complete text of the *Prostagai* survives in at least four manuscripts. The Table 5.6 shows the principal extant copies and part-copies of the text.

Of these manuscripts, the Vatican codex *graecus* 292 contains the most complete extant copy. The *Vaticanus graecus* 299 is a lengthy codex of 519 folios. Beginning at f. 219r and continuing for three hundred folios, it contains a medical collection (*conlectanea iatrika* as Mercati and Franchi de' Cavalieri describe it)[67] divided into 1,547 chapters. These *collectanea* contain two distinct, but both partial, copies of the *Prostagai*. The first is in sequential chapter order and the second distributed by topic. It need not be remarkable that the text appears, in differing extracts, twice in the manuscript. So relatively long *conlectanea* – possibly combined with the compiler's occasion, time and resources to assemble them – make duplication of this kind a probability.[68]

The sequential version in the early folios of the *conlectanea* is shorter than that in *Vaticanus graecus* 292. Designated here as *Prostagai* 299 (1), this version ends at the chapter *On pleurisy* (chapter 13)[69] at whose close is the sign †, often the mark of the end or beginning of a copied passage. Whilst its chapters follow the same order as those of codex 292, it omits five chapters:

- chapter 7 (περὶ στομαχικῶν, *peri stomachikôn*, *On stomach disorders*);
- chapter 12 (περὶ βηχικῶν, *peri bêchikôn*, *On coughs*);
- chapter 14 (περὶ ἰκτερικῶν, *peri ikterikôn*, *On jaundice*);
- chapter 15 (περὶ ἀρθρίτιδος, *peri arthritidos*, *On gout*);
- chapter 16 (περὶ νεφρῶν, *peri nephrôn*, *On kidneys*).

The second collection of *Prostagai* is distributed by topic throughout ff. 255r–407v of the same codex. It is identified here as 299 (2) and contains only the first eight chapters of the *Prostagai*. These dispersed chapters are those that do not start with the formula πρόσταξον (*prostaxon*, "prescribe"), which appears in the last seven chapters of the text as in manuscript *Vaticanus graecus* 292, to which chapter 9 should be added. The dispersed chapters of the *Prostagai* contained in the Vatican manuscript can be found at the following folios:

- chapter 1 (περὶ συνεχῶν πυρετῶν, *peri sunechôn puretôn*, *On continuous fever*): ff. 276r, l. 28–278r, l. 15;
- chapter 2 (περὶ κεφαλαλγίας, *peri kephalalgias*, *On headache*): f. 307r, ll. 7–18;
- chapter 3 (περὶ ἀγρυπνίας, *peri agrupnias*, *On catalepsy*): f. 255r, ll. 18–23;
- chapter 4 (περὶ κοιλιακῶν, *peri koiliakôn*, *On stomach disorders*): ff. 406v, l. 28–407v, l. 20;
- chapter 5 (περὶ ἡπατικῶν, *peri hêpatikôn*, *On liver disorders*): f. 374r, ll. 11–22;
- chapter 6 (περὶ σπληνικῶν, *peri splênikôn*, *On spleen disorders*): f. 377v, ll. 5–16;
- chapter 7 (περὶ στομαχικῶν, *peri stomachikôn*, *On stomach disorders*): f. 368r, ll. 25–368v, l. 7;
- chapter 8 (περὶ ὑδερικῶν, *peri huderikôn*, *On dropsy*): ff. 381v, l. 19–382r, l. 2.

The remaining codex that offers evidence, although from a *terminus ad quem* alone, is the early fourteenth-century codex *Vîndobonensis medicus graecus* 37,[70] in which there is a copy of approximately five hundred words of the fevers chapter of the *Prostagai* (chapter 1) in the company of passages extending in time from Hippocrates to Theophanes Chrysobalantes.[71]

Two other copies of the *Prostagai* exist, one in the Marciana Library in Venice,[72] and another in the Ambrosiana Library in Milan.[73] There is also a fragment on fevers (chapter 1) in a cento in the codex *Parisinus graecus* 2236.[74] It is probable that the *Prostagai* text, or excerpts from it, are also present in as yet unexamined medical manuscripts.

Table 5.7 lists the *Prostagai* chapters and their plɑce in the principal manuscripts. The Ambrosian codex is the most recent copy that, notwithstanding the dictum *recentiores, non deteriores*,[75] appears to be so closely related to the Vatican codex *graecus* 292 that there are no useful grounds for including it in the study. Nor need we discuss the fragment in the Marcian manuscript; it is patently unlettered with little to contribute to this discussion. The readings in the dispersed chapters in *Vaticanus* 299 (2) are, in turn, close to those copied in Romanos/Theophilos, whereas those in 299 (1) have a closer affinity to those in Vatican codex *graecus* 292. Yet the text in codex 292 has numerous unsatisfactory readings, variant punctuation that adversely alters the sense of the text, as well as reduplications and frequent alterations of remedy ingredients on comparison with

Table 5.7 The *Prostagai* chapters in the principal manuscripts of the text

no.	*Subject*	*Romanos*	Vind. med. *gr. 37*	Vat. gr. *292*	Laur. *75, 19*	Vat. gr. *299 (1)*	Vat. gr. *299 (2)*
1	No title. Fevers	26v	83r–v	200v	89v	248r	276r
2	περὶ κεφαλικῶν	29v	-	203v	93r	250v	307r
3	περὶ ἀγρυπνίας	-	-	204r	-	250v	255r
4	περὶ κοιλιακῶν	30r	-	204r	93r	251r	406v
5	περὶ ἡπατικῶν	22r	-	206v	-	252v	374r
6	περὶ σπληνικῶν	25r	-	207r	88r	253r	377v
7	περὶ στομαχικῶν	23r	-	207r	-	-	368r
8	περὶ ὑδερικῶν	-	-	207v	125r	253v	381v
9	περὶ ῥιγιῶν	-	-	208r	-	254r	-
10	περὶ σκοτωματικῶν	33r	-	208v	97r	254r	-
11	περὶ ἰσχιαδικῶν	33v	-	208v	97v	254v	-
12	περὶ βηχικῶν	37v	-	209v	102r	-	-
13	περὶ πλευριτικῶν	37r	-	210r	101r	255r	-
14	περὶ ἰκτερικῶν	41v	-	210v	107r	-	-
15	περὶ ἀθρίτιδος [*sic*]	-	-	210v	-	-	-
16	περὶ νεφρῶν	34v	-	210v	98v	-	-

the other manuscripts. The fragment of the fevers chapter in Vienna codex *medicus graecus* 37 is too short to make a useful judgement on it, except to remark on some kinship with the text in Vatican codex 299 (2).

The evidence of the *Prostagai* vocabulary for dating its compilation is difficult to adduce in so short a text largely confined to medical terminology. Linguistic evidence includes, amongst the medical terminology, several *hapax legomena* and late usages.[76]

There are two instances where vocabulary in the *incipits* of the five principal copies suggests a *terminus a quo* for the *Prostagai*. The first is the use of the words ὁ ἄρρωστος (chapter 1, *the sick person*) or the variant ὁ ἀνακλιθεὶς ἄρρωστος (chapters 5 and 7, *the recumbent sick person*) in three of the first seven chapters, and the second the departure from that formula in almost all the others (chapters 8, 10, 11, 12, 13, 14, 15 and 16) whose first word is the the operative imperative πρόσταξον (*prostaxon*, "prescribe").

ἄρρωστος (*arrôstos*) appears, in the meaning here, to be a usage attested by Galen,[77] that continued to the time of Iohannes Archiatros in the fourteenth century.[78] In combination with ἀνακλιθείς (*anaklitheis*), it implies a bed-bound patient, whether at home or in a *xenôn*. Paul of Aegina wrote infrequently of "the patient", usually leaving the word to be understood in the inflection of a verb or participle. Occasionally he would use ὁ πάσχων (*ho paschôn*) or ὁ κάμνων (*ho kamnôn*) (*the suffering* or *sick person*), but his emphasis was more on signs and symptoms than on the patient.

The use of προστάσσω (*prostassô,* "prescribe") in the imperative, or any other mood, is similarly absent from earlier writers, Paul using principally the common

words "order" (κελεύω, *keleuô*), "it is necessary" (δεῖ, *dei*), or often "one must give" (δοτέον, *doteon*) or "one must use" (χρηστέον, *chrêsteon*). Alternatively, the physician's course of treatment is indicated by a verb of action in the first-person singular or plural (for example, "I [or we] shall give").

These few examples render vocabulary here a doubtful means of attempting to date a text, especially late copies that may have been the subject of copyist's "improvements".

The title in its variant forms is no real aid to dating the text, not least because, as this study argues, it is unlikely to have accompanied the archetype of the *Prostagai*. In the most complete *Prostagai* version, that in the codex *Vaticanus graecus* 292, it ascribes the text to the μεγάλων ξενόνων (great *xenônes)*,[79] suggesting a *xenôn* tradition as the source of the assembled remedies.

Prostagai kai tupoi

The opening words προσταγαὶ καὶ τύποι (*prostagai kai tupoi*, "prescriptions and formulae") in the Vatican codex 292 are both precise and concise. Of the affections cited in the text, some are common ailments such as coughs (περὶ βηχικῶν, chapter 12), headaches (περὶ κεφαλαγίας, chapter 2) or insomnia (περὶ ἀγρυπνίας, chapter 3), others potentially more serious, including liver (περὶ ἡπατικῶν, chapter 5), spleen (περὶ σπληνικῶν, chapter 6) and kidney affections (περὶ νεφρῶν, chapter 16). The text reads as a relatively simple compilation of remedies, broadly ordered *a capite ad calcem*, purportedly for hospital use. Its brevity contrasts with other more extensive collections of remedies of which that of Nicholas Myrepsos is perhaps the largest.

The *Vaticanus graecus* 299 (2) version of the *Prostagai* ascribes the chapters of the text to the well-authenticated Mangana *xenôn* in Constantinople. We shall see, however, that the text matches portions of that of Romanos. Consequently, we need to consider the relationship between the extensive text of Romanos and the *Prostagai*.

If Romanos was familiar with the *Prostagai*, which he incorporated in his *De acutis et chronicis morbis*, they clearly existed before, or were contemporary with his *floruit*. Who then was the author of the *Prostagai*, or perhaps their authors as suggested by their two principal textual types? The first with a reference to the recumbent patient (ὁ [ἀνακλιθεὶς] ἄρρωστος, *ho* [*anaklitheis*] *arrôstos*), with ἀνακλιθείς evocative of a ward or domestic bedside setting, and the second opening with the imperative πρόσταξον (*prostaxon*, "prescribe"). At the transition are two chapters (6 and 8) that belong to neither type.

The version 2 of the *Prostagai* in the *Vaticanus graecus* 299, which contains only the first eight chapters, explicitly indicates that such chapters come from the Mangana *xenôn* except for the first one, where the reference is to a hospital whose name is not mentioned (f. 276r, l. 28: "ἐκ τοῦ ξενῶνος περὶ πυρετῶν"):

- chapter 2: πρόσταξις τοῦ ξενῶνος τῶν μαγγάνων πρὸς κεφαφαλγικούς (f. 307r, l. 7);
- chapter 3: (f. 255r, ll. 18–23);

- chapter 4: πρόσταξις τοῦ ξενῶνος τῶν μαγγάνων περὶ κοιλιακῆς διαθέσεως (f. 406v, l. 28);
- chapter 5: περὶ ἡπατικῶν πρόσταξον ἐκ τοῦ ξενῶνος τῶν μαγγάνων (f. 374r, l. 11);
- chapter 6: πρόσταξις περὶ σπληνὸς τοῦ ξενῶνος τῶν μαγγάνων (f. 377f, ll. 5–6);
- chapter 7: πρόσταξις στομαχικὴ τοῦ ξενῶνος τῶν μαγγάνων (f. 368r, l. 25);
- chapter 8: ἀπὸ τοῦ ξενῶνος τῶν μαγγάνων · ὅσοι δὲ εἰς ὑδερὸν . . . (f. 382v, ll. 19–20).

The contents

The *Prostagai* contains sixteen chapters, each identified with a proper title, except the first one (Table 5.7).

Each of the first nine chapters opens with the presenting signs or symptoms of the *patient*. The last seven chapters simply open with the instruction πρόσταξον (*prostaxon*, "prescribe").[80] Between these two groups are two chapters (8 and 9), almost certainly from a different source or sources. Chapter 8 is on the subject of ὑδερικόν (*huderikon*), the fluid retention once called dropsy (anasarca); chapter 9 deals with the treatment of shivering fits, ῥιγία (*rhigia*), perhaps in many instances symptomatic of malaria. The broad subject headings of each chapter undoubtedly conceal the more serious manifestations of disease that patients present.[81] The title of the *Prostagai* might seem to promise an opportunity of illuminating the clinical and "ward" practices of *xenônes,* but the *Prostagai* are no more than lists of ingredients for a number of clinical conditions.

The vigour of the first and longest chapter, *On continuous fevers*, differs distinctly from that of the last four short and pedestrian ones. This first chapter carries the reader from symptom to symptom and treatment to treatment through the passage of the critical days. Of some thousand words, it is by far the longest chapter; its source is uncertain. The two that follow, on headache (chapter 2) and catalepsy (chapter 3), are relatively short and prescribe for symptoms often associated with fever. Chapter 4, on stomach affections, falls just short of 700 words. The remainder range between 78 and 271 words, with the exception of the chapters 13–16 averaging 50 words each and lacking instructions for the preparation and dispensing of their remedies.

These disparities between the differing chapter *incipits*, style and detail of the sequential content are most visible in the codex *Vaticanus graecus* 292. For example, more remedy ingredients, both in simple and in special medicines, are prescribed in the latter part of the text in proportion to the length of each chapter.[82] In the chapters 1–7 of the first part, terms for ingredients make up between 12 per cent and 18 per cent of each chapter. In the remaining part (chapters 8–9 and 10–16), the range is between 19 per cent and 33 per cent. The last chapters (15–16) are little more than a recital of ingredients prescribed for each affection; these contrast, too, with the narrative of the other chapters where the prescription relates to presenting signs and symptoms and to the effects of the season on

prescribing. Effectively the proportions are skewed by the presence or absence of this narrative, in itself an indicator of differing methodology among the subjects of the text. In addition, in the chapters of the second part (8–9 and 10–16) the prescription of medicines identified by name in contrast to lists of ingredients is particularly notable. Methodology aside, the frequent reference to compounds by a name, the absence of instructions for preparing the ingredients and making up the medicine reinforces the likelihood of a usership of physicians and pharmacists.[83]

An analysis of the limited but technical language of the text by certain recurring features, chapter by chapter in each codex, is of limited value in a search for its origins.[84] Nor does the distribution, by chapter, of measurements of ingredients – beneath the overlay of copyists' amendments, additions and glosses – show any distinctive pattern, if only because of insufficient material. Measurements exist in only five chapters (extensively in chapter 1 on fever chapter, and much less so in 4, 7, 8, 14), but without pattern. Directions for use show, not unexpectedly, that "prescribe" (πρόσταξον, *prostaxon*) is common to all chapters, although "give" (δίδου, *didou*) is preferred in its place in the version *Vaticanus* 299 (1).

Reading the *Prostagai* text

The introductory and descriptive phrase that heads the *Prostagai* is both factually descriptive of the contents at the same time as suggesting to the user the professionalism of the physicians on the hospital wards. The reference to *experience* (πεῖρα, *peira*), marks the practical nature of the text – ". . . ὅσα ἐκ πείρας ἰατρῶν παῖδες . . ." – the kind that physicians prescribe from experience. In the codices *Vaticanus graecus* 299 and *Vindobonensis medicus graecus* 37, the meaning of καί (*kai*, especially) is not clear (". . . καὶ τοῖς ἄλλοις πῶς πάσχουσιν").

It may imply that the text was available to any clinician but was primarily designed for use within hospitals. Alternatively, *especially* introduces a definition, clarifying the status of the patients – that is, they are in hospital. Similarly, the enclitic πῶς (*pôs*) that follows τοῖς ἄλλοις (*tois allois*) in *Vaticanus graecus* 292 does not lend itself to easy translation here. It is echoed in the chapter 11, περὶ ἰσχιαδικῶν (*peri ischiadikôn*), with the phrase τοῖς δὲ ἄλλοις πῶς πάσχουσιν (*tois de allois pôs paschousin*) which is found in manuscript *Vaticanus graecus* 292.[85] It is tempting to conjecture that the copyist misread, in an earlier unknown text, τοῖς (*tois*) for πῶς (*pôs*): τοῖς would be syntactically and grammatically correct, and felicitous in the context.

As for προσταγαὶ καὶ τύποι (*prostagai* and *tupoi*), Miller translates it as "orders and routines".[86] An alternative translation might be "prescriptions and regimes", reflecting the prescriptive style of the text and its directions on the use of medicines and therapies. Galen, however, uses τύποι, in context, to refer to classifications of fever, permitting the apt translation "prescriptions and classifications".[87]

The title describes the general and principal purpose of the text, "especially for the hospital patients", and makes a subtle distinction between the great *xenônes* and other *xenônes*. Yet the *xenônes* of the title are unnamed, the remedy text is relatively short, and its subject matter is too selective to bear the wording of the

title. In practice, the content is more in the nature of an explanatory rubric that assumes the nature, at the same time, of an *incipit*. It pronounces the virtues of the remedies used in *xenônes* in the hands of experienced physicians to the benefit of patients, as it were a "promotional" legend, more expansive than most. It is at the same time broadly descriptive as befits a practical, as distinct from literary, text.

The text contrasts with other remedy and treatment works in its brevity. For example, Alain Touwaide speaks of the opinion of Edouard Jeanselme and Aristotelis Kousis, that they "agreed that Byzantine therapeutic manuals were composed by a process of accumulating prescriptions, repeated over time".[88] Kousis went further in proposing that they also included "new and original data coming from contemporary practice".[89] In the intervening centuries the accretions to the remedies in the fourteenth-century texts are noticeable. Even the *Apotherapeutiké* portion of the Romanos text, where the two manuscripts overlap, shows some minor variations from its counterpart, but, word for word, the two manuscripts are closest of the five principal manuscripts of this study. The readings in the interspersed chapters of the text in codex *Vaticanus graecus* 299 (2) are, in turn, close to those of Romanos and Theophilos, whereas those in text codex 299 (1) have a closer affinity to those in Vatican codex *graecus* 292. Yet the codex 292 text has numerous unsatisfactory readings, variant punctuation that adversely alters the sense of the text, reduplication of text and frequent alteration of remedy ingredients on collation with the other manuscripts.

A fevers text?

The *Prostagai* are a remarkably brief compilation compared to most remedy texts of these centuries.[90] Might not the first and longest chapter on fevers look ahead to the following seven chapters on affections in which fever may be a prodromal symptom? The case histories in the *Epidemics* of the Hippocratic corpus relate numerous examples of fevers of one type or another associated in modern medicine with bowel, liver, spleen and stomach affections. For example, according to *Epidemics I*, Philiscus' fever is accompanied by scanty excreta, sleep problems and a "swollen" spleen.[91] This seems to reverse the perception of Western modern medicine, for which "fever is a symptom, and . . . only one of the indications of a specific disease. In Antiquity, the fever itself was the disease . . .".[92] Yet, the first chapter of the *Prostagai* text on remittent fevers aside, there is scant mention of fevers in the rest of the text with the exception of chapter 9 περὶ ῥιγίων (*peri rhigiôn*),[93] chapter 5 on liver affections (περὶ ἡπατικῶν), which touches on whether the patient is febrile or not, and chapter 7 on stomach affections (περὶ στομαχικῶν), which specifies that the patient be free from fever before treatment. The *rigor* chapter is present in only two manuscripts,[94] but, significantly, it is not in that of Romanos/*Apotherapeutiké*.

None of these few examples admit any claim that the text is a fever manual in part or in whole. It is indeed possible within modern medicine to make a case for fever as a symptom of almost all the affections cited in the text, but difficult to substantiate, and doubly difficult in the context of that age when[95]

> [t]he descriptions given [of fever were] seldom precise enough to permit a retrospective diagnosis, but many of the fever cases were probably a result of remittent or intermittent malaria.

Malaria, once called the ague, is also frequently associated with gut problems, diarrhoea and nausea, as well as headache and backache. Cerebral malaria, in turn, causes the patient's condition to degenerate rapidly from a fever, shivering, confused conversation and headache to delirium and death in a matter of hours.

Hence, the version Vatican 1 of the *Prostagai* proem supports this view. Fevers may well accompany, or *vice versa*, any of the ailments listed in the *Prostagai* text.

The clinical perspective

The proem in all manuscripts of this text lays emphasis on πεῖρα (*peira*), almost to the extent that its presence surpasses the merits of medicines, plasters and poultices alone.[96] *Peira* is an essential element of medicine, then and now, reflecting the physician's absorption of experience and its application. Galen is reputed to have written:[97]

> It is possible that someone learns this (medical) art, then he neglects experience and practice and remains lagging behind an experienced physician. On the other hand, those who have never learned this art will gain nothing by experience.

It is the same *peira* that in the Hippocratic corpus is "synonymous with competence, and always carries a positive connotation".[98] These qualities are barely transmissible in the remedies on the page, and the interest of the modern reader is unlikely to be engaged, unless for scholarly research, in past remedies that, to today's reader, generally appear to be neither safe, practical nor meaningful. This perspective might, not unreasonably, contribute to a view of Byzantine medicine as a medicine of "stagnation and plagiarism".[99] In contrast, the *collectanea* of Vatican codex *graecus* 299 are also witness to correspondence among *xenôn* doctors from the Mangana *xenôn* that evokes a rather more energetic picture of *xenôn* medicine in the Late Period of Byzantium.[100] These physicians correspond with one another about remedies and treatments, good practice and prescription of tried treatments. The *collectanea* also quote an unattributed remedy that evokes a system for medical education of a more formal kind than that from father to son or within an apprenticeship:[101]

> εἰς φλεγμονὴν χειρὸς φλεβοτομηθείσης ἐκ τοῦ ξενῶνος, καθὼς ἐδιδάχθημεν
>
> For inflammation of a hand (in which) a vein has been opened: *as we were taught at the xenôn*.

John Riddle observed of fifth- to tenth-century medicine that "a medical practice existed based upon a pharmacy that not only preserved the older practical

knowledge but also recognised and used new drugs".[102] Yet the drugs in the *Prostagai* are almost entirely those familiar from texts such as the *Therapeutikai*.

The *Prostagai* first chapter opens with prescriptions for patients with a continuous fever, according to the daily passage of that fever's course and intensity; some symptoms, such as a tense abdomen combined with a high fever, are given special attention. There follow prescriptions for the critical days; on the eighth or tenth days bleeding is necessary, especially when the patient suffers pain and sleeplessness. The progress of the fever calls for prescriptions for the period after the fourteenth day followed by further bleeding for a second or third time if the progress of the fever is becoming protracted. The chapter continues with the patient's dietary requirements, including the preparation and dispensing of oxymel, and then reverts to the medical needs of the twentieth and twenty-first days, an assessment of whether the fever is by then slight or protracted. The chapter closes with ointments, poultices and plasters for application to fevered patients, not the least of which is the *Great Plaster*. Almost as detailed a chapter is that on diseases of the bowels (chapter 4).

The subsequent six chapters, each focusing on the recumbent patient (*arrôstos anaklitheis*), are similarly fashioned, if rather less detailed. The *prostaxon* chapters, in contrast, have an altogether different tenor, shorter and more concise, especially in the last four.

Interpretation of the whole text from the perspective of modern medical practice is problematic, often because the translation of the chapter headings only loosely corresponds to current nosological nomenclature. Even where there is correspondence, the gap between the diagnostic scope of late medieval medicine and that of present-day differential diagnosis is wide. For example, the *Prostagai* chapter on headache (chapter 2) embraces simple headache, migraine and severe headache, where current diagnostics would extend over five major heads and at least fifteen subheads of headache, some of which may be indicators of potential morbidity. In contrast, chapter 10 on scotomy (περὶ σκοτωματικῶν) describes dizziness or vertigo, a term now used to denominate an area of absent or depressed sight in the visual field.

A similar difficulty is that of determining what the semeiography of an affection may mean in current medical terms. Is the ἀγρυπνία (*agrupnia*) of the *Prostagai* text (chapter 3) sleeplessness or some form of catalepsy? Theophanes Chrysobalantes observes that "*agrupnia* is a coma when sufferers are at one and the same time asleep and awake . . ., or rather in a state betwixt and between".[103] What do the shivering fits (*rhigia*, chapter 9) signify? Here the text makes clear that they are symptoms of daily, tertian and quartian fever, symptomatic perhaps of malaria.[104]

Equally uncertain is the extent of the practice of bleeding at the time of Romanos' *floruit*. His near contemporary Theophanes Chrysobalantes proposes phlebotomy in only two of the 297 chapters of his *Epitome de curatione morborum*, an indication perhaps that its use – and therefore, perhaps, its value – was then diminishing.[105] In contrast, the *Prostagai* incorporates bloodletting in half of its chapters. Of the *prostaxon* group, five chapters (sciatica [11], pleurisy [12], jaundice [14], gout [15] and kidney affections [16]) prescribe bloodletting, each with an accompanying

requirement for purging.[106] In contrast, of the chapters of the *anaklitheis arrôstos* group, only two, those on liver (5) and spleen (6), prescribe bleeding, but in rather more detail, using the terms ἐξακρισμός (*exakrismos*) and σφαγολυτία (*sphagolutia*), expanded in codex 299 (2) in the following description:[107]

> ὁ δὲ ἀνακλιθεὶς ἄρρωστος σπληνικὸς εἴπερ ἐστι, δεῖ προστάττειν κατ᾽ ἀρχὰς φλεβοτομίαν ἐκ τοῦ ἀριστεροῦ μέρους σφαγολυτίαν · ἢ ἐξακρισμόν · μέσον τῶν δύο δακτύλων τοῦ τε μικροῦ καὶ τοῦ μετ᾽ αὐτοῦ τῆς ἀριστερᾶς χειρός
>
> If the recumbent patient has a disease of the spleen, you should from the outset prescribe the letting of blood on his left side, (that is) σφαγολυτία (*sphagolutia*) or ἐξακρισμός (*exakrismos*), (specifically) between the two fingers, the little one and the one after it, of the left hand.

The meaning of the terms σφαγολυτία and ἐξακρισμός, which are common to each of the five versions of this passage, is unclear,[108] but the lack of explanation indicates their familiarity to physicians; they may be procedures or, more probably, designations of veins in the arm similar to the "basilica" and "cephalic" veins terminology, Owsei Temkin notes, from the ninth century and eighth century respectively.[109] He continues:[110]

> The terms (*basilic and cephalic*) have not been found in classical Greek authors, and where they occur later, in Greek, Latin and Arabic works, they are, at first at least, always mentioned in connection with phlebotomy. I believe (they) . . . stem from the language of everyday practice.

If, then, ἐξακρισμός (*exakrismos*) and σφαγολυτία (*sphagolytia*) had also entered the language of everyday practice, or, here specifically, *xenôn* practice, they are by analogy with Temkin's judgement likely witnesses to the same period. Irrespective of their meaning, the emergence of these "unfamiliar" terms implies some kind of advance or defining of techniques, not otherwise practised.

The fourteenth-century copies, not least the two "versions" in the Vatican codex *graecus* 299, witness a text of utility amidst what Herbert Hunger once called "a jungle of remedy texts".[111] Copies of a concise text of this kind may have escaped loss or destruction, not least because of its relative brevity and utility. Equally survival may rest not only on chance but also on the reputation for success of the remedies; on this clearly there is no means of forming a judgement. To seek to heal was a charitable act; the *xenôn* in which its physicians served was an agency to this end. They could not always heal: Christ alone was the healer and people's efforts could not be sufficient on their own. There are, too, other considerations in seeking recovery in sickness, not least the *vis naturae medicatrix* and the patient's will to live.

Notes

1 The term διάφορος (*diaphoros*) means "various" or "several".
2 In this sense, see Criscuolo 1996: 116.

3 *Ibid.*, 123–124.
4 Manuscripts are listed according to the alphabetical order of their current location (English translation of city names).
5 Hunger 1978: 1.100–101 records the text in the Vienna codex as running from ff. 1r–46r, l. 14, but careful inspection made on photos suggests its conclusion is at f. 42v, line 11. At the end of l. 11, the copyist's hand alters to a rapid and uneven state, and the rest of that page and of f. 43r are filled with extracts from the *De curatione morborum* of Theophanes Chrysobalantes. At f. 43v, there follows, in the same rapid hand to l. 20, what appears to be a brief extract from a botanical lexicon. It comprises five entries, ὤκιμον, τιθύμαλλος, λαθυρίδες, κενταύρειον τὸ μικρόν and ἐπίθυμον κράτιστον, specifying their uses. At line 20, the original hand resumes, but the text is a miscellany of medical topics at odds with the structure of Romanus' text. These miscellanea continue to f. 46r, l. 24, where a lengthy extract from Galen begins.
6 The common passage is at ff. 24r–42v in the *Vindobonensis medicus graecus* 48, and ff. 87r–108v in the *Laurentianus* 75, 19.
7 See Hunger 1969: 100.
8 See Bandini 1764–1770: 3.166–168.
9 De Nessel 1690: 3.53–54.
10 Diels 1905: 14, 96, 99; Diels 1906: 78, 88.
11 On this manuscript, see Mercati and Franchi de' Cavalieri 1923: 378–384.
12 See Criscuolo 1996: 120 (on the basis of manuscript *Vindobonensis medicus graecus* 48; for the version of *Vaticanus gaecus* 280, see Kousis 1944b: 163).
13 See Mercati and Franchi de' Cavalieri 1923: 381.
14 On this church, see Janin 1969: 515–523.
15 On this hospital, see Janin 1969: 560; Miller 1985: 95, 113–114, 116, 135, 154, 15, 164; Birchler-Argyros 1998: 118n2.
16 Darrouzès 1970: 39–44. Hunger 1978: 2.307, Eftychiadis 1983b: 292 and Criscuolo 1996: 114 each endorse this period. More recent scholarship suggests, however, that the office did not survive the eleventh to twelfth centuries (see Kazhdan et al. 1991: 2.1155, *sub verbo koubouklеisios* [A. Kazhdan]).
17 Criscuolo 1996: 114.
18 *Vindobonensis medicus graecus* 48, f. 1r, ll. 20–22: "χρῆ οὖν ἡμᾶς πρότερον ὁρίσθαι περὶ πυρετῶν διαγνώσεως καὶ θεραπείας, τί εστι πυρετός". The text of Aetios is that of the first chapter of the fifth book of his *Libri medicinales* (ed. Olivieri 1935–50: 2.6).
19 Criscuolo 1996. We can add περὶ ἡμιτριταίου (*peri hêmitritaiou*) in the ἀπροθεραπευτική (codex *Laurentianus* 75, 19, f. 117v, ll. 13–21) corresponding to chapter 142 of *Theophanes Chrysobalantes*, *De curatione morborum* (ed. Bernard 1794: 1.444–445).
20 A difficulty lies in the quotation from the otherwise unknown Cosmas Actuarius whom Eftychiadis 1983b: 301, assigns to the eleventh century. The office of *aktouarios* in its medical sense probably did not come into being until the eleventh or twelfth centuries.
21 See the Vienna codex, f. 11v, l. 7: κομίδιν σαρακηνικόν. For the identification, see du Cange 1688: 698 *sub verbo* κομίδι, *Gummi Arabicum*.
22 Codex *Laurentianus* 75, 19, f. 132r, in margine: περὶ γυναικῶν ἐμμήνων; ll. 10–11: "λουλάκιν καὶ μελάνθην ζύμωσαν μετὰ μέλιτος καὶ ἐπάλειφε εἰς βαμβάκιν καὶ τίθει συχνῶς εἰς τὸν στόμαχον". Ieraci Bio 1996: 203, describes as "langue vulgaire" word formations of this kind. The more familiar readings would be λουλάκιον and μελάνθιον. Βαμβάκιν reflects βαμβάκιον, a word recorded in the so-called *Suidas, Lexicon,* Β 90 βάμβαξ (ed. Adler 1928–38: 1.452) and meaning here "cotton", or more likely "a wad of cotton". It is found also in the copy of the *Therapeutikai* in the 15th-century codex *Oxoniensis Baroccianus* 150, f. 29v, col.1, l. 26.
23 Horrocks 1997: 157.
24 Criscuolo 1996: 114.
25 *Vindobonensis medicus graecus* 48, ff. 1r–9r, l. 5.

26 *Vindobonensis medicus graecus* 48, f. 18r, ll. 16–18: "πόσα ὄργανα φωνητικά; ἕξ · γαργαρεών, λάρυγξ, τραχεῖα, πνεῦμων, θώραξ". The scribe had written "ἀρτυρία" after "τραχεῖα".
27 Codex *Laurentianus* 75, 19, ff. 82v–149r. For its *incipit*, see above Table 5.1.
28 Southern 1992: 28 (reproduced in Tolan 1993: 205).
29 Kousis 1944a: 45.
30 Kousis 1944a: 37.
31 See principally, *Galenus*, *De sanitate tuenda*, 3, 6 (ed. Kühn 1821–33: 6.197, l. 6), 3, 7 (*ibid.*: 202, l. 6), 3, 11 (*ibid.*: 222, l. 11 and 223, ll. 12–13), 3, 12 (*ibid.*: 225, ll, 11–12 and 226, l. 6) and 4, 4 (*ibid.*: 246, ll. 7–8). See von Staden 2002: 25. ἀποθεραπευτική is also used earlier in this same Laurentian codex at f. 5r, in the plural number and genitive case ("τῶν ἐκ τῆς τοῦ Κοιράνου βίβλου ἀποθεραπευτικῶν"), to describe that part of the treatise ascribed to *Koiranos*. These instances are significant, for the relative rarity of the word in this form in common medical usage contrasts markedly with the two uses in titles in the Laurentian codex.
32 Ieraci Bio 1996: 194.
33 The § 5–7 of *Anonymus, De natura hominis* (ed. Ideler 1841–42: 1.294–296, especially 294, ll. 12–23).
34 Ieraci Bio 1996: 205 (on the use of sources) and 200 (on the differentiation between diagnostics and therapeutics).
35 The prooemion to Romanus' text stresses this. On orders of presentation in ancient medico-therapeutic treatises, see Riddle 1985: xxvii–viii.
36 Riddle 1985: 94–131.
37 This is already the case in the second century A.D., in *Galenus*, *De simplicium medicamentorum temperamentis et facultatibus* (ed. Kühn 1821–33: 11.369–12.377).
38 On substitution, see, for example, *Pseudo-Galenus*, *De succedaneis* (ed. Kühn 1821–33: 19.721–747). On this work and the whole genre of substitution lists, see Touwaide 2012.
39 The first, second, fourth and possibly the sixth treatises in this Laurentian codex 75, 19 exemplify, in whole or in part, the alphabetical treatment of the subjects of the text.
40 This corresponds to *Aetius*, *Libri medicinales*, Book II (ed. Olivieri 1935: 17–146).
41 See the codex *Florentinus Laurentianus* 75, 19, f. 124r: τὰ ἐκτὸς τοῦ σώματος.
42 *Aetius*, *Libri medicinales*, Book IV (ed. Olivieri 1935: 356–408).
43 *Paulus Aegineta*, *Epitome medicinae*, 1 (ed. Heiberg 1921–24: 1.6–72; Engl. tr. Adams 1844–47: 1.1–186).
44 Ieraci Bio1996: 200, accepts that the general structure is not "organique", but argues that each subject is well organised.
45 Hunger 1978: 2.301n54: "Die Autorfrage bleibt offen".
46 On this manuscript see Revilla 1936: 376–383.
47 On him, see Touwaide 2009b.
48 See ff. 126r–140r. Description of this apparently unpublished text in Revilla 1936: 381–382.
49 See Diels 1906: 105 for the *Scorialensis*, and Diels 1908: 68 for the second, codex *Vaticanus Palatinus* 199, f. 190 (on this manuscript, see Stevenson 1885: 99–101). Interestingly enough, it is from Southern Italy (Reggio) (Ieraci Bio 1989: 171, 174, 177, 180, 182, 185, 189, 193, 194, 210, 234, 235).
50 Theophilos' works are the following: *Commentarii in Hippocratis aphorismos* (ed. Dietz 1834: 2.245–544), *De corporis humani fabrica* (ed. Greenhill 1842), *De excrementis* (ed. Ideler 1841–42: 1.397–408), *De pulsibus* (ed. Ermerins 1840: 3–77), *De urinis* (ed. Ideler 1841–42: 1.261–283).
51 Kousis 1944a: 45; and Ieraci Bio 1996: 192.
52 *Florentinus Laurentianus*, 75, 19, f. 149r, ll. 12–13.
53 Kousis 1944a: 45.
54 *Laurentianus* 75, 19, f. 131v, ll. 25–26: " . . . βοηθήματα δὲ πρόσταξον . . . κωναρίων ιβ΄ μετὰ ῥοδίνου ἐλαίου καὶ ἀγιάσματος τῶν ἁγίων θεοφανίων . . .".

55 Kousis 1944a: 45.
56 Alexander Kazhdan in Kazhdan et al. 1991: 2.1155, *sub verbo koubouklεisios* notes that *koubouklês̄ios* was a title conferred on patriarchal chamberlains, but it was also an honorific title.
57 Sonderkamp 1987: xviii–xix, discusses 104 such manuscripts.
58 That is, not copied by professional scribes.
59 Criscuolo 1996: 115.
60 Hunger 1969: 100.
61 *Vindobonensis medicus graecus* 48, f. 12r, ll. 9 and 15–16 respectively.
62 Criscuolo 1996: 116, calls this ΛΒ΄ "un signe marginal" that probably marks the change from one writer's work to another's. It would be a very considerable coincidence if this were so. On the other hand the text adjacent to ΛΒ΄ is about τὸ ἀβρότονον which Criscuolo attributes to *Paulus Aegineta*, *Epitome medicinae*, 3.7 (ed. Heiberg 1921–24: 1.146, ll. 19–27). It is not to be found there, but in 7.3 (ed. Heiberg 1921–14: 2.186, l. 23–187, l. 4; Engl. tr. Adams 1844–47: 3.17). As for the reference to a later chapter ϱε΄on epilepsy, there is an extract from *Paulus*, *Epitome medicinae*, 3.13 (ed. Heiberg 1921–24: 1.152, l. 17–155, l. 13; Engl. tr. Adams 1844–47: 1.376–379) περὶ ἐπιληψίας at f.125r in the Vienna codex.
63 In both the *Vindobonensis medicus graecus* 48, f. 26v, l. 27, and the *Florentinus Laurentianus* 75, 19, f. 89v, ll. 13–14, the text starts without title (*Vindob.* ll. 13–14: "θεραπεία πυρετοῦ · ἐὰν πυρέσσῃ ὁ ἄρρωστος . . ."; *Laur.*: "θεραπεία εἰς πυρέττοντα · ὅταν πυρέσσῃ ὁ ἄρρωστος . . .").
64 Continuous remedy text.
65 Dispersed remedy text.
66 On these manuscripts, see Mercati and Franchi de' Cavalieri 1923: 406–409 and 425–430, respectively.
67 *Iatrika* is the description given by Mercati and Franchi de' Cavalieri 1923: 428, §13, "conlectanea ἰατρικά in capp. 1547 tributa". Throughout this chapter, the terms *iatrika* (that is, *medica* [*capitula*], "medical chapters") and *collectanea* (that is, *collectanea medica*, "medical collection") are used with specific reference, the first to the text of the entire text of ff. 219r–519v and the second to the discrete medical text of therapies of ff. 260r–430v within the *iatrika*.
68 The catalepsy remedy (chapter 3, περὶ ἀγρυπνίας, *peri agrupnias*) occurs three times in the *conlectanea*: once in each of the two versions of the *Prostagai* and once more f. 278r, where the text corresponds closely to Theophanes Chrysobalantes, *Epitome de curatione morborum*, chapter 31 (ed. Martius 1568: 35–36).
69 *Vaticanus graecus* 299, f. 255r, l. 6.
70 On this manuscript, see Hunger 1969: 89–90.
71 The cited authors included in the 120 folios of the codex are Hippocrates, Galen, Alexander of Aphrodisias, Aetios, Theophilos Protospatharios and Theophanes Chrysobalantes. Theophanes is not named in the manuscript and the passage is attributed to an Anonymus by Hunger.
72 Codex *Venetus Marcianus*, *Appendix graeca* V, 7 (coll. 1054), f. 90r, followed by the opening words of the fevers chapter (chapter 1). On this also manuscript see Mioni 1972a: 258–261; and Formentin 1978, 10, 60, 69, 75, 93, 98, 99 and 100. See Sonderkamp 1987: 222: "f. 92r, 1, 11–92v, 2, 54 sind ein Nachtrag von Hand B; es handelt sich um einen geschlossenen Komplex unter der Überschrift: προσταγει [*sic*] τῶν φηλόσόφων [*sic*]; inc: ἐαν πυρέσοι ὁ ἄρρωστος πρωΐ".
73 Codex *Mediolanensis Ambrosianus* P 90 sup., ff. 93r, l. 16–105r, l. 7, on which see Martini and Bassi 1906: 716–717.
74 Folio 45v, col. 1. On this manuscript, see Omont 1888: 219.
75 For the dictum, see Pasquali 1952: 43–108.
76 The term ἀνακλιθείς (*anaklitheis*) used in chapters 5 (περὶ ἡπατικῶν) and 7 (περὶ στομαχικῶν) about a patient is a late usage. Two phlebotomy sites or technical terms,

σφαγολυτία (*sphagolutia*), with the verb σφαγολυτεῖν (*sphagolutein*) and ἐξακρισμός (*exakrismos*), with the verb ἐξακρίζειν (*exakrizein*), occur in chapters 5 (the two substantives) and 6 (the two verbs), and appear to be *hapax legomena*. The phytonym " . . . τὴν τιβεριάδα λεγομένην βοτάνην . . ." (*tên tiberiada legomenên botanên*) in chapter 8 (περὶ ὑδερικῶν) attested in *Vaticanus graecus* 299, f. 381v, l. 19, may be a recent usage (twelfth century), provided it is not a mistake for " . . . τὴν ἰβερίδα λεγομένην βοτάνην . . ." (*tên iberida legomenên botanên*) attested by the other manuscripts.

77 ἀρρώστημα and ἀρρωστία are used by Galen, as well as ἄρρωστος. See Durling 1993: 74–75 (who does not list ἄρρωστος); and Gippert 1997: 1.155–157 (where the three terms are present with all their occurrences).

78 For example "ἐὰν ὁ ἄρρωστος αἰσθάνεται ὅτι ἔχει βάρος ἡ κεφάλη" in the codices *Monacensis graecus* 288, f. 35v, and *Parisinus graecus* 2224, ff. 84v, and 92r, "τὸν ἄρρωστον".

79 *Vaticanus graecus* 292, f. 200r, ll. 23–26.

80 Each of these two groups will be denominated as follows in the following pages: "ὁ ἄρρωστος ἀνακλιθείς" (*ho arrôstos anaklitheis*) and πρόσταξον (*prostaxon*).

81 For example, the simple diagnosis of headache (chapter 2) may superficially conceal tumour, meningitis or encephalitis as well as the common headache.

82 By special medicines are meant those whose composition is not detailed, but were designated by name to practitioners. Examples of these special medicines can be found in *Galenus*, *De antidotis* (ed. Kühn 1821–33: 14.1–209) or *Paulus Aegineta*, *Epitome medicinae*, 7.5–20 (ed. Heiberg 1921–24: 2.280, l. 16–392; Engl. tr. Adams 1844–47: 3.493–598); they include ἀντίδοτον τοῦ ἕσδρα, διοσπολίτη, ἔμπλαστρον τὴν χρυσήν, ἡ πικρά, τὸ ἐκλεκτόν, etc.

83 For the ordinance requiring the appointment of a *xenôn* pharmacist, see the *Pantokrator typikon*, l. 1025 (ed. and Fr. tr. Gautier 1974: 100–101; Engl. tr. Jordan 2000: 763), with Gautier 1974: 88 and n11.

84 Explanatory particles and phrases such as ἤγουν, ἤτοι, ὅπερ δέχεται, etc. . . . Recurring features include the instances of the genitive absolute and certain directions for use in the imperative mood.

85 See f. 209r, l. 22, with πῶς (*pôs*), whereas the other manuscripts do not have this πῶς (*Vindobonensis medicus graecus* 48, f. 34r, l. 15, *Laurentianus* 75, 19, f. 98r, l. 2, and *Vaticanus graecus* 299, f. 254v, l. 22).

86 Miller 1985: 179.

87 In this sense, see Durling 1993: 315–316.

88 See Touwaide 2007a: 153, commenting on Jeanselme 1930, particularly 163, 168–170, and Kousis 1928: 77–78.

89 Kousis 1928: 78.

90 And not in Byzantium alone. See the notebook of "tried and tested" medical recipes, compiled in 1515, for the Ospedale Santa Maria Nuova in Florence that contained some one thousand remedy recipes. See Park and Henderson 1991: 35, 174.

91 *Corpus Hippocraticum*, *De morbis popularibus I*, 13 (ed. and Fr. tr. Littré 1839–61: 2.682–685; ed. and Engl. tr. Jones 1923: 186–187).

92 Nutton 2004: 32.

93 These are the quotidian, tertian and quartan fevers.

94 Codices *Vaticani graeci* 292 and 299 (1).

95 See Jackson 1988: 23; and also Lascaratos and Marketos 1997: 106–109, for an example of this argument. The diagnosis of malaria was unknown in ancient times; it first came into use in English in the eighteenth century, but in centuries before that it was doubtless recognised that the low-lying places that harboured "bad air" gave rise to the symptoms that were, in the words of Jones 1947: 159, "often called simply 'fever' without further qualification". See also Sallares 2002.

96 See Hankinson 2008: 176–178 and 314–316, for *peira* in its broader context.

97 Iskandar 1962: 362–365.

98 From Jouanna 1999: 257 (translation of Jouanna 1992: 365 " . . . elle est synonyme de compétence. Elle a toujours une valeur positive").
99 Scarborough 1984a: ix, on the common view of how medical historians see Byzantine medicine.
100 As do letters touching on medical matters among the educated of this period.
101 *Vaticanus graecus* 299, f. 422v, ll. 15–28. See also, for example, Eftychiadis 1983a: 14–15.
102 Riddle 1974: 159.
103 *De curatione morborum*, 31 (ed. Bernard 1794: 1.118–121).
104 The classification of fevers in Byzantine medicine is extensive. See, for example, the several treatises *De febribus*, from *Pseudo-Alexander Aphrodisiensis* in the early third century (ed. Tassinari 1994) and *Palladius* (or *Stephanus*), *De febribus synopsis* (ed. Ideler 1841–42: 1.107–120) to the many anonymous treatises of various length to be found in Byzantine medical manuscripts of later period.
105 *Epitome de curatione morborum*, 7 and 123 (ed. Bernard 1794: 1.38–43 and 1.370–379, respectively, especially 40, l. 6 and 372, l. 5).
106 On this prescription, see, for example, *Paulus Aegineta*, *Epitome medicinae*, 6.40, § 2, on venesection (ed. Heiberg 1921–24: 2. 78, ll. 11–14; Engl. tr. Adams 1844–47: 2.316) on the need to be sure before bleeding that there is no faecal obstruction, and to use an emollient clyster if indicated.
107 Codex *Vaticanus graecus* 299, f. 377v, ll. 6–9.
108 The etymology of these two substantives is unclear. For σφαγίς (*sphagis*) see Stephanus 1831–65: 7.1567. For ἄκρισμα (*akrisma*) see *ibid.*, 1.1, 1304. The two terms ἐξακρισμός and ἐξακρίζειν refer to ἄκρισμα (*akrisma*) used by Pantaleon Deacon of Constantinople in the eighth century (*Pantaleon Diaconus*, *Sermones*, 1 [ed. Migne 1863: 1245, col. 1, l. 45 = D1; according to Stephanus 1831–65; 1.1, 1304, this is the only occurrence). This term suggests hands or feet as phlebotomy sites (the Latin text in Migne [above, col. 2, l. D2 = 47] reads "herbarum radicibus" where *radicibus* translates ἀκρίσμασι, *akrismasi*; here, this might refer to the feet)
109 See Temkin 1961.
110 Temkin 1962: 113.
111 Hunger 1978: 2.304: "Niemand wird monatelange Arbeit auf das Lesen elend geschriebener Codices aufwenden wollen, um zuletzt eine Rezeptsammlung mehr aus dem Dschungelbereich der Iatrosophia in Händen zu haben . . .".

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6 Armoury, monastery, infirmary

The Mangana *xenôn* remedies; Codex *Vaticanus graecus* 299

> Presque tous les hommes meurent de leurs remèdes, et non pas de leurs maladies.
> Molière, *Le malade imaginaire*, act III, sc. iii

Near the great Tower of Mangana, not far from a depot for military *ballista* in Constantinople, stood numerous monasteries. Nearby was the Palace of Mangana. In this same quarter Emperor Constantine IX Monomachos (emp. 1042–1055) built a *xenôn* and a monastery. The monastery complex was to be destroyed by the Turks after the fall of Constantinople in 1453, making way for the building of the Topkapi Palace by the conquerors. The fate of the *xenôn* is not clear, but it may once have been where the Emperor Alexius I Komnenos died from, it is believed, natural causes. "May have been" because the fifteenth and last book of the *Alexiad*, his daughter's memorial to his reign, describes his death in filial detail and refers to it taking place at Mangana, after his transfer there from the palace.

Ten remedies, three physicians

The passages containing remedies ascribed to the Mangana *xenôn* and its physicians are dispersed between folios 307r and 420v of the *Vaticanus graecus* 299. They are full of interest and curiosities, and lengthy too. They form a very small part of the whole *iatrika* contained in ff. 219r–519v of the manuscript, perhaps no more than 1 per cent. These passages are listed in Table 6.1 in the order in which they appear in the *Vaticanus graecus* 299.

The significance of these passages rests not only on their being the sole medical fragments purporting to derive from the Mangana *xenôn* but also on the inclusion amongst their number of six passages that correspond – with variant readings – to chapters in the *Prostagai* of Vatican codex *graecus* 292. In the *Vaticanus graecus* 299 these six *Prostagai* chapters are ascribed not to the "great *xenônes*" of the title of the *Prostagai* but to the Mangana *xenôn*. Three of the remedies are attributed to physicians of senior rank, *archiatros* (fragment 4) or *aktouarios* (fragments 6 and 10); one of their number is also designated *Basilikou archiatrou* (fragment 6), a term that implies a position at court.

Table 6.1 Passages of the *Vaticanus graecus* 299 referring to the Mangana *xenôn*

No.	*ff.*	*Title*
1	307r, l. 7	(Remedy) of the Mangana *xenôn* for headache
2	368r, l. 19	Another remedy of Theodore, Mangana physician, for blockage of the stomach
3	368r, l. 25	Mangana *xenôn* stomach prescription (*Prostaxis*)
4	368v, l. 7	A letter from Thessalonica from Stephen, Mangana *xenôn archiatros* (on stomach, spleen and liver)
5	374r, l. 11	Mangana *xenôn* liver prescription
6	374r, l. 22	(A remedy of) Abram Sarakênos, Mangana (*xenôn*) *aktouarios* and also *Basilikos archiatros* for jaundice of the liver, (affections of the) spleen and (?) hip disease
7	377v, l. 5	Mangana (*xenôn*) prescription for the spleen
8	381v, l. 19	Mangana (*xenôn* prescription) for dropsy
9	406v, l. 28	Mangana *xenôn* prescription for stomach (affections)
10	420v, l. 23	Prescription for ruptures/lesions, (that of) Stephen, Mangana physician and *aktouarios.*

It is immediately apparent that, in the Mangana fragments, stomach affections predominate and that the other remedies, apart from those for headache and for ruptures/lesions, are for affections of the gastric region. Symptoms go unrecorded. The remedy of Abram is curious to modern eyes (fragment 6): a purgative for jaundiced liver, and spleen and sufferers from sciatica.[1] It is tempting to see an example of scribal error, particularly in ἰσχιαδικόν (*ischidiakon*), an inflammation of the sciatic nerve deriving from inflammation or injury to the nerve. It is difficult to determine an alternative reading, and we must accept what is written here.

Several of the remedies are attributed to physicians who presumably attend patients at the Mangana *xenôn*. Each of these physicians has a grade. Thus, Theodore (fragment 2) is perhaps less experienced than Stephen (fragments 4 and 10), first referred to as *archiatros*, but in the last remedy as *aktouarios.* Abram (fragment 6) is referred to solely as *aktouarios.*

The office of *archiatros* has a long history going back to Roman times.[2] As its name implies, it was held by a physician of senior rank. In one of his letters, Theodore of Stoudios (759–826) refers to grades and status within the medical profession.[3] To make sense of the history of the grading of clinical staff in Byzantine medicine is not easy, but here an *archiatros* is almost certainly the senior physician of a *xenôn*. It is an office referred to three times in *The Miracles of St. Artemios*, clearly in the sense of head physician, in the mid-seventh century.[4]

Some of the Mangana passages suggest evidence for their date of composition. This evidence on examination conflicts with Timothy Miller's contention that the physicians to whom some of these passages are attributed practised in the fourteenth century.[5] Implicit in this view, and stated in his 1985 monograph, is his further contention that the Mangana *xenôn* was re-founded after the Latin occupation

of Constantinople in 1204–1261. We describe briefly here the composition of the *iatrika* of the *Vaticanus graecus* 299 and the Mangana passages within them, as well as evidence for their date and provenance.

The enigma of the Mangana remedies

Martin West observes that "some kinds of text were always subject to alteration".[6] This was very much the case with the generality of therapeutic texts, but we may anticipate that these Mangana *xenôn* remedies amongst which several recipes are attributed to specific physicians remain much as when first devised. Nonetheless, the detail of this short text assembled from remedies scattered through a three-hundred-folio *iatrika* presents a number of questions that derive from their occurrence in other remedy texts.

The founding of the Mangana *xenôn* postdates the accepted *floruit* of Romanos. Herein lies an enigma. If the Mangana *xenôn*, founded in the eleventh century in the reign of Constantine IX (emp. 1042–1055), was the remedies' provenance, the Mangana passages could not have been known to Romanos in the tenth century. The case for the ascription of a later date to Romanos may be tested not only from his medical *curriculum vitae* in the prooemion to his *De acutis et chronicis morbis* but also by reference to codicological evidence. The dates at which he could have been writing and at the same time be familiar with the *Prostagai* passages will be bounded by the Latin occupation of Constantinople in 1204. A comparison of the *Prostagai* passages in the codices *Vindobonensis medicus graecus* 48 (the Romanos text), *Laurentianus* 75, 19 (the *Apotherapeutiké*), *Vaticanus graecus* 292 and the two versions in *Vaticanus graecus* 299 demonstrates that the first two codices have fewer variants and that the remainder are contaminated by interpolation to various degrees. The inference follows that the texts in the Viennese and Laurentian codices contain copies of the *Prostagai* passages closer in time to the autograph copy of the Romanos/Theophilos text than those in the other manuscripts.

There is silence in the primary sources about the Mangana *xenôn* after 1261. A manuscript that promises evidence, codex *Vaticanus Palatinus graecus* 128[7] contains a draft will, one of whose clauses is in favour of the Mangana *xenôn*. It is inconclusive. Giovanni Mercati, who describes it, gives no opinion on the date of the hand in which the will is drafted.[8] It is on a large sheet of paper which was folded in half and trimmed at the edges to allow incorporation into the codex so as to make available the blank verso of the whole sheet for alternative use; as a result, indications of date at its conclusion are lost. A copyist, Athanasius Chatzykes the monk, wrote, on this sheet, stanzas in praise of John of Damascus and the prophet Daniel.[9] Although Chatzykes' dates are unknown, it is probable that his *floruit* was in the thirteenth century, for he was the recipient of a letter from the patriarch of Constantinople Gregory of Cyprus (ca. 1240–1290, patr. 1283–1289).[10] If the draft were dated after 1261, the will favours Miller's assertions of a later date and provenance of the Mangana passages. A draft dated before 1204 changes nothing but leaves indeterminate the length of time before the re-use of the sheet of paper for Chatzykes' stanzas.[11]

The Mangana attribution

"A prescription of the Mangana *xenôn*" and "from the Mangana *xenôn*" are the introductory phrases that open and identify these short fragments. Their source is the Vatican manuscript *graecus* 299, in the hand of perhaps four unidentified copyists at some time towards the end of the fourteenth century. The fourth hand undertook the greater part of the codex – that is, the *iatrika* of three hundred folios preceded by a pinax or table of contents. It in turn is preceded by a miscellany of shorter items, including texts by Ioannes Aktouarios, Merkourios the Monk and Paul of Aegina. Mercati and Franchi de' Cavalieri describe the *iatrika* as "a collection of medical passages (*conlectanea iatrika*) divided into 1547 chapters". Most of these chapters originate from familiar medical writers up to and including Theophanes Chrysobalantes, although many sources are not immediately identifiable. The remedies attributed to the Mangana *xenôn* suggests a possible *terminus post quem* for the *conlectanea iatrika* of no later than the date of the fall of Constantinople to the Latin West in 1204.[12]

The codex contains two distinct but incomplete copies of the *Prostagai*; the first is in sequential chapter order, the second distributed by topic throughout ff. 255r–407v of the *collectanea*. Whether the *collectanea* were intended as a practical manual for daily clinical use or simply for reference is not apparent. Its 170 folios (260r–430r) arguably weigh against daily use. The text of the sequential *Prostagai* chapters lacks the chapters on stomach affections, coughs, jaundice, gout and kidney affections found in Vatican codex *graecus* 292.[13] The dispersed chapters, in contrast, are those that allude to the "recumbent patient" alone.[14]

We must briefly look back to the *Prostagai* and beyond, for its first eight chapters are attributed to the Mangana *xenôn* in the *Vaticanus graecus* 299. The attribution of the first seven chapters (the *arrôstos* group) and the dropsy one (chapter 8) to the Mangana *xenôn* suggests their familiarity as an entity that at some time became incorporated into the *Prostagai* compilation of the Vatican codex *graecus* 292.

Physicians of the Mangana *xenôn*

In the *Vaticanus graecus* 299 is a glimpse of Byzantine clinical practice and of *xenôn* practitioners at work, not only among the *Prostagai* remedies attributed to the Mangana *xenôn*, but also in a number of other Mangana *xenôn* remedies attributed to practitioner by name and position. They include Stephen the physician, Theodore the *archiatros*, and Abram Sarakênos the *aktouarios*.

That all these remedies have a common source in the Mangana *xenôn* is acceptable only on the circumstantial evidence of their inclusion in the *collectanea* of *Vaticanus graecus* 299 and their (uncorroborated) attribution to the Mangana *xenôn*. The link pre-supposes the existence of a lost text originating from the *xenôn*, consisting of remedies and medical notes – some kind of commonplace book on which the compiler drew. The remaining strands of evidence about offices support, at their broadest, the composition of a Mangana *xenôn* text, from which the

passages were excerpted, before 1204, and certainly need not belie a date towards the close of the eleventh century implicit in the interpretation of the indictions.

There need be little doubt about the date of the codex *Vaticanus graecus* 299. The evidence of the hand and the watermarks supports the whole manuscript's ascription to the latter part of the fourteenth century.[15] Yet, the evidence is lacking for the existence of the *xenôn* as a functional hospital after the Latin occupation of Constantinople. During this period, the Knights of the Order of St. John, the Hospitallers, may have occupied the premises.[16] Thereafter there is no record of it, albeit that Emperor Michael VIII Palaiologos (emp. 1259–1582) restored the Monastery of St. George in the Mangana.[17] The fate of the other buildings associated with the *xenôn* is, too, unknown. If the establishment of a new foundation of the Mangana *xenôn* were to be a sustainable theory, its substantiation would be significant for the dating of the text.

The conclusion that the passages, those ascribed to the *xenôn* and those that have been associated with it, are traceable to a text or texts of the tenth century or earlier does not conflict with their use in a twelfth-century *xenôn*. It serves to show their presumed utility. The date of the first compilation of the *collectanea vaticana*, however, is more problematic, although it matters only in the sense that its compiler had access among his numerous sources to a text that originated from a *xenôn*. If the *collectanea* were compiled before the Latin occupation, then it suggests that the *xenôn* source was in wide circulation, or even that the compiler was associated with the Mangana *xenôn*. The inference follows that *xenôn* physicians recorded treatments and remedies and were by that token active in taking forward medical knowledge and, by the evidence of the letters, in exchanging medical information. It is, however, arguable that all this is fictitious, that names of a renowned *xenôn* and its staff are used to lend authority to content.

It is similarly possible that the passages under consideration here did not originate from a single source at the Mangana *xenôn*, or chance that they appear to have a *xenôn* association. Their attribution here to the Mangana *xenôn*, to an unnamed *xenôn* and, in codex *Vaticanus graecus* 292, to "the great *xenônes*" makes it possible to conjecture that the Mangana *xenôn* is among the "great *xenônes*" of the title of the *Prostagai* in Vatican codex *graecus* 292. It could equally be argued that the process took place in the opposite direction; the anonymous *Prostagai* text "of the great *xenônes*" was appropriated to the Mangana *Xenôn* as its own. These conjectures deserve no more than to be recorded, and this enigma left unresolved.

Description and dating of the Mangana passages

The Mangana passages in the *collectanea* that are ascribed not only to the *xenôn* but also to named members of its medical staff, or to other named physicians, are listed in Table 6.1. They contain six dispersed fragments that correspond, with some textual variants, to six chapters of the *Prostagai* of codex *Vaticanus graecus* 292, but here specifically ascribed to the Mangana *xenôn*, and four passages ascribed to named physicians of the Mangana *xenôn*.

To that we can add the first *Prostagai* chapter, that on fevers, bearing a variant of the title of the *Prostagai* encountered in Vatican codex *graecus* 292. The title of the chapter is preceded by the words ἐκ τοῦ ξενῶνος (*ek tou xenônos*, "from the xenôn").

On the assumption that the Mangana *xenôn* was founded ca. 1050–1060,[18] it would have been in existence for some 125 years by the year 1204. Six Mangana passages are cognate with chapters in the *Prostagai* in the codex *Vaticanus graecus* 292. The argument in Chapter 5 placed the composition of the *Prostagai*, despite doubts about its unitary nature, in the centuries preceding the Latin occupation. Timothy Miller has taken the first compilation of the *iatrika* of the *Vaticanus graecus* 299 to be contemporaneous with the manuscript in which it was copied; this was the basis on which he concluded that the Mangana *xenôn* was still functioning in the late fourteenth century when "the *xenôn* treatment list [was] prepared by the staff of the Mangana hospital".[19] But the earlier dating of the *Prostagai* discounts that view if the implication is that the six passages were devised by the *xenôn*. Four of the remaining Mangana passages provide similar evidence of an earlier provenance, even though the Mangana *xenôn* physicians are unknown.[20]

One passage in particular provides a time frame for the *collectanea.* At f. 393v of the Vatican codex 299, the text tells, purportedly in the words of the physician Eustathius, of a report from some reliable men of Soskon in the Theme of Bulgaria about the work of a Frankish physician:[21]

> ἤκουσα κἀγὼ Εὐστάθιος ὁ εὐτελὴς ἰατρὸς παρά τινων ἀξιοπίστων ἀνδρῶν κατὰ τὸ θέμα Βουλγαρίας ἐν τῷ ἄστει Σουσκῶν · παραγεγομένου Φράγγου τινὸς ἰατροῦ · καὶ εὑρόντος παῖδας δύο ἐν τῷ αὐτῷ ἄστει πάσχοντας καὶ ὀδυνομένους ὑπὸ τῆς στραγγουρίας νόσου
>
> I, Eustathios the careful physician, have heard from some worthy men from the theme of Bulgaria in the town of Soskon about a certain Frankish physician who arrived and found two children in the selfsame town who were suffering and in pain from retention of urine.

The report continues with an account of the surgery that this physician carried out on the children; he dated his report "January of the ninth indiction". The city of Soskon has not been identified, but the theme system in Bulgaria began in 1018 and ended ca. 1186 with the independence of Bulgaria from Byzantium.[22] Although there is no evidence of association with the Mangana *xenôn* (unless perhaps through correspondence with one of its physicians), it contributes to the estimation of a *terminus post quem* for the original compilation. A ninth indiction in the period 1018–1186 falls between 1056/1057 and 1176/1177.

A second passage relating to chronicled time is at f. 344v. Again the indiction stands alone but is clarified by a historical reference in the preceding sentence. The passage refers to the physician Theodore, arguably one and the same as Theodore, the Mangana *xenôn* physician. A summary of its opening paragraph reads:[23]

> Λέοντος ἰατροῦ πιττάκιν σταλὲν ἀπὸ Θεσσαλονίκης Νικηφόρῳ Καίσαρι δεσπότῃ τῷ Μελισσηνῷ πρὸς ἰατρὸν Θεόδωρον περὶ κυνάγχης νόσου καὶ

τοὺς ἰατροὺς Βερροίας τὶ ὀφείλουσιν χάριν σωτηρίας προσάγειν αὐτῷ · μηνὶ δεκεμβρίῳ εἰς τὴν ἡμέραν κη΄ ἰνδ. δ΄ου.

A note from Leo the physician sent from Thessaly to Nikephoros, head of state in Melissene for Theodore the physician about a sore throat (copy to the physicians of Berrhoea about their responsibilities for public protection). December, fourth indiction.

Nikephoros Melissenos, whom Leo calls both δεσπότης (*despotês*) and Καῖσαρ (*kaisar*), had rebelled in 1080 against the Emperor Nikephoros III Botaniates (emp. 1078–1081), but was later allowed by Alexius I Komnenos (emp. 1081–1118) to settle in Thessalonica.[24] These events took place at the time of the fourth indiction in 1080/1081 referred to in the message. The passage of twenty-six lines in the *Vaticanus* 299, which sets out various treatments for a sore throat or inflammation of the larynx, concludes with the words εἶχον δὲ κἀγὼ, Εὐστάθιε, καὶ τούτου πεῖραν παρὰ πολλῶν ἰατρῶν, perhaps indicating the value of the treatment. Leo, the sender of the note, is not identifiable. If Eustathios, the addressee of his letter, is the same person as the chronicler of the surgery carried out by the Frankish physician in Soskon, his account may be placed at about the same time as the events surrounding Nikephoros Melissenos, perhaps 1071 or 1086, these ninth indictions being the nearest to 1080/1081.[25] Both passages fall, therefore, some twenty or more years after the founding of the Mangana *xenôn*.

Theodore is mentioned twice in the *Vaticanus* 299.[26] Little is known about him. There is a reference to a Theodore of Macedon in the second part of the *iatrika*.[27] There are two physicians named Theodore in the Palaeologan prosopography, one of them Theodore Argyropoulos.[28] The latter lived in the last quarter of the thirteenth century, and Theodore in the second half of the fourteenth century.[29] Nothing suggests a link between either of them and the Mangana *xenôn*, but, if it could be demonstrated in the case of Argyropoulos, it would favour Timothy Miller's dating of the fourteenth century for at least one of the passages. Theodore is, however, a relatively common name, and it is unlikely that the Theodore of the Mangana *xenôn* is one and the same as either Theodore in the prosopography.[30]

Stephanos the *archiatros* provides grounds for confining the passages to a point in time.[31] In a discussion of the ancient rank of *archiatros*, Timothy Miller asserts that it was replaced in the tenth century by that of *protomenutês*.[32] He refers to Stephanos' letter at f. 368v, where he is called *archiatros*, and argues that "since the Mangana xenon served the imperial court through the 14th century, . . . (Stephanos) might have used this title in its most primitive sense".[33] This assertion was necessary if he was to maintain that the manuscript was contemporaneous with the *iatrika*.[34] But since this argument of synchronicity itself needs corroboration, Miller's assumption about the rank of Stephanos consequently raises doubts. Furthermore, at f. 322v, l. 27, Stephanos is also called *iatros*, and at f. 420v, l. 23, *aktouarios*. It is possible that there were two, or even three, physicians called Stephanos in office at the Mangana *xenôn*, but more likely that, in these examples, *iatros* and *archiatros* are used in the generic sense, and that *aktouarios* was Stephanos' substantive rank. *Aktouarios*, though a term dating back to the late Roman

Empire, only came into use in medicine to denote the court physician in the latter years of the eleventh or early twelfth century.[35] Although its introduction coincided with the early years of the Mangana *xenôn*, plainly the *aktouarioi* of the *iatrika* text might have held office then or at any time thereafter. To that extent, Timothy Miller's observations are not implausible.

Miller quotes in one endnote a few words of the descriptive heading that introduces Stephanos' letter,[36] but omits, as do Constantelos and Janin, the six words of address to the recipient that are relevant to the chronology. The text at f. 368v, with the omitted six words in bold, reads:[37]

> ἐπιστολὴ ἀπὸ θεσσαλονίκης παρὰ στεφάνου ἀρχιϊάτρου τῶν μαγγάνων **πρὸς ἰώαννην ἐξάκτορα ἰατρὸν τὸν χαλέ** περὶ στομαχικῶν σπληνικῶν καὶ ἡπατικῶν.
>
> Letter from Thessalonica by Stephanos, Archiatros of the Mangana (*Xenôn*), **to Ioannes Chale, *exaktor* and physician**, about stomachs, spleens and livers.

There is no other record of Ioannes Chale, or perhaps Khaled.[38] Nor is it apparent why Stephanos should be writing to him from Thessalonica, the same city from which Leo sent his *pittakin* to Theodore. As for the omission of *xenôn* from the description, it is safe, in terms of the office which Stephanos is described as holding, to infer that "of the Mangana" refers to the *xenôn* of that name in Constantinople and not, by inference, one of the other institutions in the Mangana district.[39] Whether the text is the transcription of a genuine letter remains open to question. After the opening sentence of the letter, the text is terse in the manner of Byzantine *remedia* of the late period, all but two of the verbs being (in the imperative mood) instructions on cooking, chopping, cutting and mixing ingredients. It runs to twenty-one lines in the manuscript. There follows immediately the note (f. 369r) "the end of (excerpts) from Alexander and others" (τέλος ἀλεξάνδρου καὶ τῶν λοιπῶν, *telos Alexandrou kai tôn loipôn*), after which the text resumes with a budget of liver remedies.[40]

It is Stephanos' correspondent who provides a fresh co-ordinate in determining an approximate date for the letter. The office of *exaktôr* is defined by Alexander Kazhdan as that of a fiscal official of the late Roman Empire.[41] Mention of the office is not found in the sources after the sixth century but it re-appears in the tenth-century *Taktikon of Escurial*, which indicates that the holder retained fiscal duties or, alternatively, had a judicial seat on the imperial tribunal.[42] Kazdhan concludes that after 1204 the post was unknown.

An office of this kind appears to sit ill with the medical duties of Ioannes the physician, but there is supporting evidence of similar combined offices. A signatory, also called Ioannes, to an eleventh-century deed to the Hiera-Xerochoraphion monastery is described as *protospatharios*, great *cartoularios* and *exaktôr*.[43] Kazhdan's opinion about the office's desuetude is, if correct, significant for the dating of Stephanos' letter. If the post was unknown after 1204, then, with some leeway given to the precision of that date, the letter to Ioannes was written

between the founding, in the mid-eleventh century, of the Mangana *xenôn* and the late 12th century.

As for Abram Aktouarios, Miller says of him, ". . . the Mangana treatment list confirms that the aktouarios Abram was associated with the Mangana hospital later in the fourteenth century."[44] The text begins:[45]

> τοῦ Σαρακηνικοῦ τοῦ Ἀβραμ · καὶ ἀκτουαρίου τῶν μαγγάνων καὶ βασιλικοῦ ἀρχιιατροῦ · βοήθημα καθαρτικόν · ἐπί τε ἡπατικῶν καὶ σπληνικῶν καὶ ἰσχιαδικῶν
>
> Abram the Saracen and Aktouarios of the Mangana (*xenôn*); also Imperial Archiatros – his cleansing remedy for jaundiced livers as well as spleens and those with hip affections.

Abram the Arab (τοῦ Σαρακηνοῦ, *tou Sarakênou*) was *aktouarios* of the Mangana *xenôn* as well as imperial *archiatros*.[46] Here is a further example of the persistence of the office of ἀρχιατρός βασιλικός (*archiatros basilikos*) either implying imperial status or referring to an uncertain *basilikos xenôn*. George the Monk, who was also a physician, and Stephanos were similarly described as "of the imperial *xenôn*" (βασικλικοῦ ἰατροῦ). There is, however, doubt about whether a hospital of that name existed. Raymond Janin confines himself, in his reference to a *Basilikos xenôn*, to quoting the Escorial manuscript in which George's dated subscription (1323) is to be found.[47] He adds that it is perhaps one of those *xenônes* founded by an emperor or empress, which are referred to under another name. The balance of probabilities is that, in both Romanos' work and in the *iatrika*, *basilikos* has the meaning of "imperial", not least in the case of Abram and Stephanos, where the reading would be τοῦ βασιλικοῦ (*tou basilikou*) if the reference was to the *xenôn*.[48] The significance of the ranks of Abram and Stephanos being designated as imperial may therefore be no more than a mark of the status of the Mangana *xenôn* as an imperial foundation.

Is there any evidence in Byzantine primary sources for the office of imperial *archiatros*? In the *Alexiad*, Anna Komnena calls Kallikles, one of the three physicians of Emperor Alexios I Komnenos, only ὑπερφυής; that is perhaps translatable here as "remarkable" or "specially skilful".[49] Similarly the account of the illness of Emperor Isaac Komnenos written by Psellos, in which Psellos speaks of the superiority of his own medical abilities over those of the emperor's unnamed chief physician, nowhere refers to this anonymous physician by any title. He is called "the best of the Asclepiads (that is, physicians)", and "the premier physician" (ὁ πρῶτος τῶν ἰατρῶν).[50] As for the office of *archiatros* in Constantinople, Vivian Nutton concludes only that[51]

> . . . except for isolated references to named imperial doctors and to *archiatroi* (who are very probably the emperor's physicians), . . . it would be rash to construct an all embracing hypothesis that covers five centuries or more on such doubtful fragments [about *archiatroi*].

Abram's second rank therefore provides no evidence for dating.

The indications for dating the passages assembled here are sufficiently convincing to favour, at best, a period between the founding of the Mangana *xenôn* and the Western Crusaders' occupation of Constantinople for their composition – that is, between ca.1050 and 1204. That all are linked in some way is based only on the circumstantial evidence of their inclusion in the *collectanea vaticana* and, in the case of some of the passages, attribution to the Mangana *xenôn*. The link pre-supposes the existence of a lost text originating from the *xenôn*, consisting of remedies and medical notes – some kind of commonplace book – on which the compiler drew. No similar medical text giving names and dates appears to exist. The two dates recorded, the one in Leo's *pittakin* and the other in the report of Eustathius, are confined to indictions, from which the inference may be drawn that the presumed source text from the Mangana *xenôn* was assembled over a period of time marked only by indiction. The remaining strands of evidence about offices support, at their broadest, the composition of a Mangana *xenôn* text, from which the passages were excerpted, before 1204, and certainly need not belie a date towards the close of the eleventh century implicit in the interpretation of the indictions. When these conclusions are set beside the authorial *terminus ad quem* of Theophanes in the *collectanea vaticana*, the thesis of a later compilation, even to the fourteenth century, becomes less easy to sustain.

There need be no doubt about the date of the codex *Vaticanus graecus* 299 manuscript. Yet, the existence of the Mangana *xenôn* as a functional hospital can only be assumed, as observed earlier, up to the time of the Latin occupation of Constantinople in 1204; the *xenôn* is then said to have been occupied by the Knights Hospitaller.[52] Thereafter there is no record of it, although the Monastery of St. George in the Mangana was restored by Emperor Michael VIII Palaiologos (emp. 1259–1282).

To find arguments in favour of the *collectanea vaticana* being of fourteenth-century *xenôn* provenance is not easy. Such arguments as there are include the ascription of passages from the tenth-century *Epitome de curatione morborum* of Theophanes Chrysobalantes. The passages are either given without attribution or ascribed to Emperor Constantine Porphyrogennetos to whom Theophanes dedicated his work.[53] It is possible to infer that the passage of time has caused Theophanes' name and renown to have been lost to a fourteenth-century compiler. But not all of the numerous manuscripts of the *Epitome de curatione morborum* ascribed the text to Theophanes Chrysobalantes. Certainly, for example, the fourteenth-century codex *Vindobonensis medicus graecus* 50, which contains a copy of the *Epitome de curatione morborum*, includes the writer's name in the *incipit* to the prooemion, but the codex *Monacensis graecus* 362, which Jeremias Martius (d. 1585) of Augsburg used for his 1568 edition of the work, lacks it.[54] The manuscript used by the compiler of the *collectanea vaticana* may, therefore, have simply lacked Theophanes Chrysobalantes' name and contained only that of the dedicatee, Emperor Constantine, whom the compiler's oversight converted to that of author.

If the Mangana passages originated in the period between 1050 and 1204, and given that Theophanes Chrysobalantes' *floruit* was in the later part of the tenth

century, it is possible to argue that the gap between the two favours the hypothesis that the *collectanea vatiana* were compiled from available texts, including the source of the Mangana passages.[55] If it were accepted that the *collectanea* were a fourteenth-century compilation, some further explanation is needed for the lack of passages of works by medical writers from the eleventh to the fourteenth centuries.[56] Alternatively, it is arguable that the *collectanea vaticana* were compiled in the fourteenth century from the only books available to the compiler, none of which were later than Theophanes Chrysobalantes or, more accurately, than the manuscript that included remedies from the Mangana *xenôn*.

Timothy Miller recognises that the text of the "Mangana list" includes passages from other sources. He says of these that "it condenses from the works of classical or early Byzantine physicians".[57] Yet, passages in the *iatrika* from Alexander of Tralles or Theophanes Chrysobalantes can be easily collated word for word with the editions.[58] Evidence for editing and condensing, in the manner of the excerpted texts in the *Apotherapeutikê* of Theophilos, is lacking. Even if the *collectanea* are no more than a wealth of unedited passages linked by subject, the compilation of a medical text of this kind requires a measure of medical knowledge and a sense of how to order it. The range of named medical writers in the *collectanea* is one which should have been familiar to the recipient of a medical education. The unusually long text that results is not easily accessible for reference because of the multiplicity of passages. Its contents represent the accumulation of experience of traditional texts and their value in practice, or the result of diligent search through a number of medical texts, including that containing the Mangana *xenôn* passages, available to the compiler. There is a presumption, therefore, that the compiler had both a medical education and, given its extant length, the occasion, time and resources to assemble the *collectanea*. Whether the text was intended as a practical manual for daily clinical use or as a repository for reference remains in doubt. Its length, some 170 folios, arguably weighs against daily use.

Conclusions

The rehearsal of all the elements of the date and provenance of the Mangana passages and the *collectanea vaticana* has been extensive and complicated by the need to examine the *iatrika* in which they are found. The conclusion that the passages − those ascribed to the *xenôn* and those that have been associated with it – are traceable to a text or texts of the eleventh and twelfth centuries does not conflict with their existence in a fourteenth-century manuscript. The task of copying on so lengthy a text serves to show their utility. The question of the date of the compilation of the *collectanea vaticana*, however, is more problematic, although it matters only in the sense that its compiler had access among his numerous sources to a text that originated from a *xenôn*. If the *collectanea* were compiled before the Latin occupation, then it suggests that the *xenôn* source was in wide circulation, or even that the compiler was associated with the Mangana *xenôn*. The inference follows that *xenôn* physicians recorded treatments and remedies and were by that token active in taking forward medical knowledge and, by the evidence of the letters, in

exchanging medical information. It is possible that these letters are fictitious and that names of a renowned *xenôn* and its staff are used to lend authority to content.

It is similarly possible that the passages did not originate from a single source at the Mangana *xenôn*, or chance that they appear to have a *xenôn* association. Alternatively, an editor might propose grounds for reading μαγγάνων (*manganôn*) for μεγάλων (*megalôn*) in codex *Vaticanus graecus* 292 on the grounds of deliberate or unconscious assimilation by the copyist. It could equally be argued that the process took place in the opposite direction; the anonymous *Prostagai* text "of the great hospitals" was appropriated to the Mangana *xenôn* as its own.

As for the content of the Mangana passages in the *Vaticanus* 299 and their witness to *xenôn* clinical practice, they are, apart from the variants of the *Prostagai* passages, too few to allow a useful commentary, save that Abram's remedy is of particular historical interest. To the modern eye, the remedies are otherwise indistinguishable from the generality of those found in texts of this kind. The significance of all remedy and treatment texts is sometimes called into question because of their pedestrian nature. The witness in the *iatrika* to *xenôn* physicians in correspondence, to *xenôn* teaching and anecdote, and to the record of *xenôn* remedies is a measure of daily clinical practice. The text provides, too, a source for comparison of the day-to-day medicine of one age with that embodied in the works of earlier medical writers, and it is an integral part of *xenôn* history and its influence in Byzantine medicine, a theme now taken up in the assessment of the *Mauraganos xenôn* passages in the next chapter.

Notes

1 *Vaticanus graecus* 299, f. 374r, ll. 23–24, with *sciatica* on l. 24.
2 See Miller 1985: 152–155.
3 *Theodorus Studita*, *Epistulae*, II.162 (ed. and tr. Migne 1903: 1503/1504–1515/1516, especially 1509/1510 A5-B1). For a brief commentary on this passage of the letter, see Nutton 1984: 11.
4 For the *archiatros* in Byzantine hospitals, see Miracle 1 (ed. and Engl. tr. Crisafulli and Nesbitt 1997: 78, l.9 with related note p. 229) and 22 (*Ibid.*, 130, ll. 15 [with related note p. 262] and 134, l. 19 [with note p. 263]).
5 Miller 1985: 195, especially n36.
6 West 1973: 16.
7 On this manuscript, see Stevenson 1885: 60–61.
8 Mercati 1948: 36–47, esp. 37.
9 This copyist is not listed in the census of Greek scribes by Vogel and Gardthausen 1909 and not either in Gamillscheg and Harlfinger 1981–1997.
10 *Gregorius Cyprius*, *Epistulae*, 29 (ed. Eustratiades 1908: 428–429).
11 On the introduction of paper in 1025 in Byzantium, and shortages of writing material, see Wilson 1975: 2–3.
12 Unless the Mangana chapters are late interpolations. As for the *collectanea*, there seems little reason to doubt its pre-1204 compilation.
13 Chapters 7, 12, 14, 15 and 16 in Table 5.7 (above).
14 That is, they do not include the πρόσταξον (*prostaxon*, "prescribe") chapters that form the second group in the *Prostagai* of codex *Vaticanus graecus* 292 (= chapters 10–16 in Table 5.7 [above]).
15 See Mercati and Franchi de' Cavalieri 1923: 425–430.

16 Janin 1969: 578; and also Miller 1985: 192 and 195.
17 See Janin 1969: 70–76.
18 Janin 1969: 560.
19 Miller 1985: 183.
20 Not even Fabricius 1708–28, Book 13, the repository, *inter alia*, of obscure Greek and Byzantine physicians, identifies them.
21 *Vaticanus graecus* 299, f. 393v, ll. 4–10. The citation below corresponds to ll. 4–7.
22 Fine 1991: 200–201.
23 *Vaticanus graecus* 299, ff. 344v, l. 13–345r, l. 12, with the title at f. 344v, ll. 13–17.
24 See *Anna Comnena*, *Alexias*, II–V, VII–VIII, and X, *passim* (ed. Reifferscheid 1884, and Reinsch and Kambylis 2001), especially III.4 (ed. Reifferscheid 1884: 1.102, l. 20–105, l. 14 = Reinsch and Kambylis 2001: 1.95, l. 59–97, l. 38). See also Kazhdan et al. 1991: 2, 1335, *sub verbo* Melissenos (A. Kazhdan).
25 It is very unlikely that he was Leo the Physician who is traditionally dated to the tenth century (see Hunger 1978: 2, 305). See, however, Renehan 1984: 159n5 in which the dating of Leo the Physician is tied to that of Meletios the Monk to whom is given an absolute *terminus ad quem* of at least the thirteenth century.
26 See ff. 344v, l. 13–345r, l. 12, the Letter of the physician Leon, and f. 368r, ll. 19–21, a prescription for the treatment of blockage of the stomach (= no. 2 in Table 6.1 [above]).
27 Θεόδωρος ὁ Μακεδών. See the pinax of *Vaticanus graecus* 299, f. 232v, ll. 21–22: "ἄλλη Ἀντιγόνου τοῦ Νικαέως · ἣ ἐκέκτητο καὶ Θεόδωρος ὁ Μακεδών".
28 Trapp 1976–1996: 4, no. 7375 and *Addenda und Corrigenda zu Faszikel 1–8*, no. 91290. None of these physicians named Theodore are to be confused with the addressee in the letter of Alexander of Tralles on intestinal worms.
29 In his "Index eorum quorum medicamenta a Nicolao Alexandrino [i.e. Nicholas Myrepsos] referuntur" (see 13.9–15), Fabricius 1708–28: 13.14, lists three references to a Theodore in the thirteenth-century *Dynameron* of Nicholas Myrepsos. One of the three is to Theodore Aktouarios, and another to Theodore Magister. Fabricius asserts (*Ibid.*: 33, *sub nomine Theodorus Actuarius*) that *Actuarius* and *Magister* are one and the same person.
30 Diels 1908: 67 *sub nomine* Theodorus notes that "Ein Receptenfabrikant des XI. saec.; der Theodorus im Ottobon. ist wohl ein anderer. Auch Nicol. Myrepsus kennt Theodori".
31 He is mentioned three times in the *Vaticanus graecus* 299: at f. 322v, l. 17 (where he is identified as *basilikos iatros tou magistrou*); at f. 368v, l. 7 as the author of a letter sent from Thessalonica (see Table 6.1, no. 4); and at f. 420v, l. 23 as the author of a prescription for ruptures/lesions, where he is identified as a Mangana physician and *aktouarios* (see Table 6.1, no. 10).
32 Miller 1985: 154. Romanos describes himself as follows in the text of his *De morbis acutis et chronicis* (see the codex *Vindobonensis medicus graecus* 48, f. 1r: "προτομηνυτής τοῦ βασιλικοῦ ξενῶνος τοῦ Μυρελαίου καὶ τῆς Περιδόξου"), probably in the tenth century (Criscuolo 1996: 114).
33 Miller 1985: 154: "As late as the end of the fourtheenth century a physician of the Mangana Xenon named Stephen called himself an archiatros." In two other instances (*Ibid.*: 183), he asserts that the Mangana excerpts are contemporaneous with the dating of codex *Vaticanus graecus* 299. In each case he quotes, in an endnote (*Ibid.*: 256, n104 and n105), f. 368 of codex *Vaticanus graecus* 299 in support of his statement.
34 Miller 1985: 169: "As late as the fourteenth century, the doctors of the Mangana Xenon prepared a treatment list which included therapies extracted from his [Alexander of Tralles'] writings." The assertion is also made by Constantelos 1968: 199 with n110, and Janin 1969: 560, that manuscript and text are of the fourteenth century.
35 An early record of the rank is that of the ἀκτουαρίος Michael Pantechnes, who attended the dying Emperor Alexios I, and was perhaps associated with the Mangana *xenôn*. See *Michael Italicus*, *Epistulae et orationes*, 9 (ed. Gautier 1972: 109–115, with a brief commentary *Ibid.*: 110): "Μονῳδία ἐπὶ τῷ ἀκτουαρίῳ τῷ Παντεχνῇ".

36 Miller 1985: 256n105. It refers to the discussion of codex *Vaticanus graecus* 299 on page 183.
37 *Vaticanus graecus* 299, f. 368v, ll. 7–9. Mercati 1948: 38, reads Χάλε mistakenly as Χάγε.
38 See, however, Costomiris 1891: 104, for reference to the Arabic author of the *Ephodia*, Ahmed, "υἱὸς τοῦ Ἀβραμίου, ἔγγων δὲ τοῦ Χάλετ".
39 Miller 1985: 249n56.
40 *Vaticanus graecus* 299, f. 269r, l. 1. In fact, this is far from the end of extracts from Alexander or even "the rest": the next passage attributed to Alexander follows on f. 369v, ll 1–7.
41 Kazhdan et al. 1991: 2.766, *sub verbo* Exaktor (A. Kazhdan).
42 Oikonomides 1972: 325–326; and also Kaplan 1991: 347 and n49.
43 See the edition by Wilson and Darrouzes 1968: 18, ll. 17–18.
44 Miller 1985: 185. Abram's remedy is also copied in the fifteenth-century codex *Laurentianus* Antinori 101, ff. 353v, l. 21–354r, l. 6. In the fourteenth-century codex *Scorialensis* Ω.I.8, f. 78v, ll. 1–6 for the title, there is a remedy for the cough ascribed to Abram, son of Solomon. See also Kousis 1939: 209.
45 See *Vaticanus graecus* 299, f. 374r, ll. 22–24. For the complete description of the medicine, see f. 374r, l. 22-v, l. 11.
46 Strictly "βασιλικοῦ ἀρχιατροῦ" should be translated as "royal archiatros", but it is tempting to read it as a reference to another *xenôn*.
47 Janin 1969: 558, n1. This manuscript is the current codex *Scorialensis* Y.III.14, on which see Zuretti 1932: 38–41; and De Andrés 1965: 161–164. It is copied by five hands. Only ff. 188r–241v are by George. His colophon (f. 236r) is reproduced in Zuretti 1932: 38; and De Andrés 1965: 164. On this copyist, see Vogel and Gardthausen 1909: 82.
48 The references are to the codices *Vindobonensis medicus grecus* 48, f. 1r, and *Vaticanus grecus* 280, f. 162v.
49 *Anna Comnena*, *Alexias*, XV.11 (ed. Reifferscheid 1884: 2.311, ll. 19–20 = ed. Reinsch and Kambylis 2001: 1.499, l. 4).
50 *Psellus*, *Chronographia*, VII.74 and 78 (ed. and Fr. tr. Renauld 1926–28: 2.129 and 131; Engl. tr. Sweter 1953: 245 and 250).
51 Nutton 1977: 212.
52 Janin 1969: 578. See also Miller 1985: 192 and 195.
53 Dedication (ed. Bernard 1794: 1.4, ll. 2–4): "πρὸς τὸν Κωνσταντίνον τὸν Πορφυροτέννητον Βασιλέα, συνόψις ἐν ἐπιτομῇ ἰατρικῆς τέχνης."
54 On these two manuscripts, see Sonderkamp 1987: 251–260 and 131–134, respectively.
55 It is possible to argue that they may have been a later interpolation.
56 Unless they have gone unnoticed in the numerous unascribed passages. For medical writers of these later centuries, see Eftychiadis 1983b: 292–298.
57 Miller 1985: 183.
58 See Alexander's letter to a certain Theodore περὶ ἑλμίνθων in the *Vaticanus graecus* 299, at ff. 345r–348r, and the text in *Alexander Trallianus*, *Epistula de lumbricis* (ed. and Germ. tr. Puschmann 1878–79: 2.587–599, and 587–589 for the letter; Fr. tr. Brunet 1933–37: 2.103–113, especially 103–104 for the letter).

7 The codex *Parisinus graecus* 2194, ff. 441r–450v (*Xenonika I* and *II*)

> Have done with doctors. Don't fall into their clutches:
> you will get no help from them.
>
> *Vita Theodori Sycionis*, 156 (seventh century)

> Pray, do not place yourself in the hands of doctors, be they never so wise.
>
> Kekaumenos, *Strategicon*, 53 (eleventh century)

Theodore and Kekaumenos were clearly not assured in their respective lifetimes about the skills and fees of physicians, or even the efficacy of their medicines, but we have no authenticated knowledge that might substantiate their grievances. Did their remedies leave an unpleasant taste, empty purses, and no alleviation of ills? Would new ingredients from far countries make better medicines? Two texts from a later age in a fifteenth-century manuscript are the subject of this chapter; one of them introduces ingredients of Eastern origin.

"If medicine can only cure curable disease, and then not always",[1] what are we to say about the outcomes of the remedies described in this and previous chapters? From time to time the efficacious ingredient in an herbal preparation is recognisable by reputation, but more usually the logic of the ingredients of remedies in these texts is at first sight unfathomable. Moreover, we must allow for transmission errors and poor copying. These difficulties need be no surprise, for, in the words of Faith Wallis,[2]

> . . . pharmacology, materia medica and recipe literature are by far the best represented subject areas in manuscripts. Consequently, probably the most disturbed textual traditions are found in the herbal pharmacology.

Xenonika I and *Xenonika II*: an overview

The two texts here designated as *Xenonika I* and *Xenonika II* (*Hospitalia I* and *II*) have had scant attention in the literature. They are to be found in the manuscript *Parisinus graecus* 2194.[3] Their designation here is the adjective ξενονικά (*xenonika*), found, so far as can be determined, only in the title of each of them. Its absence from the lexica suggests a neologism.[4] Its broad meaning is clear in this

context: it might reasonably be taken to describe a genre of remedy texts for *xenônes*, but there may be an alternative interpretation of the term – for example, that it was used to advertise and validate the efficacy of collections of remedies, deriving its power of conviction from the fact (or suggestion) that the remedies were used in a hospital.[5]

Xenonika I is entitled δυναμερὸν ξενωνικὸν διὰ πείρας (*dunameron xenônikon dia peiras*, "Hospital collection of remedies based on experience" [διὰ πείρας, *dia peiras*]), and *Xenonika II*, ξενωνικά (*Hospital [remedies]*).[6] That they may have originated in hospitals relies alone on the veracity of their titles. Both record multi-ingredient remedies; shorter recipes of four, five or fewer ingredients; and also more discursive sections, probably of a didactic nature.[7] In his summary catalogue of manuscripts held by the then Bibliothèque Nationale, the curator of Greek manuscripts and paleographer Henri Omont (1857–1940) succinctly describes *Xenonika I* and *Xenonika II* as *collectiones duae externorum remediorum*.[8] In the last sixty folios of the Parisian codex (ff. 400v–464v), the two texts jointly form the seventh of nine pharmaceutical works,[9] two of which are explicitly attributed to Persian sources.[10]

Xenonika I introduces several ingredients that it is reasonable to presume had their origins in the Arabic pharmacopoeia. From the time of the Islamic assimilation of Greek scientific and medical works, particularly during the reigns of the caliphs Harun al-Rashid (regn. 786–809) and later his son Ma'mun (regn. 813–833),[11] there developed an Arabic pharmaceutical expertise that eventually surpassed and influenced that of Byzantium. Such knowledge was further transmitted to Byzantium.[12] Observing that ca. seventy texts contained in over 120 Byzantine medical manuscripts show signs of Arabic or Persian origin, Alain Touwaide has called this process "reverse influence".[13]

Selected remedies

The codex *Parisinus graecus* 2194 is an early fifteenth-century manuscript.[14] Scanty syntactical evidence suggests the *Xenonika* texts originated no earlier than the eleventh century.[15] Prosopography gives no aid in identifying the few originators of eponymous remedies. Whatever the doubts about the validity of the title of each text, their contents hold much of intrinsic interest by way of glimpses of clinical prescribing attributed to individuals, almost certainly physicians, who may, *pace* the respective text titles, have been *xenôn* medical staff.

If that were so, what were the *xenônes* for which the lists were written? Or were the texts simply a private record, for personal reference, of useful remedies employed at *xenônes*? Certainly, the random order of the remedies in *Xenonika I* might suggest that.

The first detectable sources are to be found in the three didactic paragraphs 7–9:[16]

§ 7 Signs in acute fevers indicative of whether or not they will be fatal.
§ 8 About diagnosis based on symptoms.
§ 9 What is diagnosis by inference?

They correspond to the final item in the Hippocratic *Aphorisms*, VII.[17] Furthermore, one remedy is linked to "the excellent Hippocrates" (§ 42),[18] and two remedies to Galen (§ 35 and 75).[19] Further on are two other remedies (§15 and 37) of "the very wise, learned and knowledgeable George Bekkon".[20] Do we know anything of him or of the Proclus mentioned in § 72?[21] Who was Theophanes whose ointment recipe is recorded at § 53,[22] and Rufus whose recipe for a stimulating (or possibly aphrodisiac) oil is set down in § 71?[23]

There are similar questions posed on reading *Xenonika II*. What does the inclusion of two remedies "from the Latin" (§ 50–51) indicate?[24] Who were the ἡγεμών (*hêgemôn*) Matthew and his unnamed pupil, to each of whom a remedy is attributed (§ 23).[25] Is a *certain Chrysolaos* identifiable (§ 26)?[26]

The texts

Whereas Henri Omont briefly defines *Xenonika I* and *Xenonika II* as we have mentioned, George Costomiris is more expansive in his description, especially about the remedy texts of the last sixty folios.[27] Aristotelis Kousis observes that the two texts "can provide us with several elements on medical material as well as on some preparations particularly in use in xenons".[28] There is an equally factual reference to the texts in Josef Sonderkamp's study of Theophanus Chrysobalantes,[29] and in Duffy's edition of John of Alexandria's commentaries on Hippocrates.[30]

The hand in which each text is written presents an appearance of compression, as if written in haste, with an almost cursive style suggestive of a manuscript copied for personal use.[31] The writing abounds in ligatures and abbreviations.[32] There is no adequate exemplar of the hand to be found in manuscripts of minuscule hands through the later centuries of Byzantium. At the most, it recalls a rapid and cursive hand like that of Ianos Laskaris (ca. 1445–1525) in the notebooks in which he compiled lists of libraries during his visits to libraries in the East in 1491–1492.[33]

Authenticity

To determine whether or not *Xenonika I* and *Xenonika II* are authentic *xenôn* texts is problematic and in part dependent on their titles that have the appearance of scribbled afterthoughts inserted into a cramped space above each text. "Scribbled", too, is an apt word to describe each preceding index,[34] neither of which is entirely accurate in terms of numeration of chapters. Each demonstrates omissions of paragraph titles and general inaccuracy. The reader gains the impression that the scribe left a gap between the preceding text in the manuscript and the opening paragraph of both *Xenonika I* and *Xenonika II*, to be filled in by title and index after the body of each text had been copied, a space that was to prove inadequate in each case. However, aspects of the hand in which each text was copied that favour authenticity of the titles are the relative comparability of the hand in which title and content were set down and include the similarity of ligatures and abbreviations.

The two texts are almost certainly of different dates, origin and composition. *Xenonika I* has elements of external origin; *Xenonika II* is more straightforwardly

Graeco-Byzantine in content. There remains, too, the puzzle that the last sixty folios of the manuscript that contain *Xenonika I* and *Xenonika II* are effectively appended to the four hundred folios of the greater part of the *Libri medicinales* (*Tetrabiblos*) of Aetius.

The remedies of *Xenonika I*

Superficially, the remedies in *Xenonika I* appear commonplace, very much of the kind already considered, with one specific difference, however; a number of them contain more ingredients than we have seen in earlier texts. Setting aside the aspects of cost, acquisition and preparation, that of rationale calls for examination. Some eighteen centuries have passed since the elementary ingredients of the remedies of the *Hippocratic Corpus* were recorded.[35] Galen's remedies are relatively elementary,[36] as are those of Theophanes Chrysobalantes and of the *Therapeutikai*. Some of *Xenonika I* remedies are made of more than twenty ingredients: in § 39, a pill for bloody dysentery described as "very beneficial" mixes thirty-eight items using animal, vegetable and mineral ingredients.[37] The remedy in § 46 contains thirty-four ingredients, including earths, for an unspecified preparation of an ointment for "mortifying humours of the stomach".[38]

A cosmopolitan medicine

Among the remedies of *Xenonika I* are unfamiliar terms, patently not of Graeco-Byzantine origin, recognisable chiefly by their indeclinable terminations. For example, there are ἀκλιμελὲκ (*aklimelek*, "melilot") or ταροννίτζιν (*taronnitzin*, "oil of Syrian cedar").[39] These stand out from the more familiar ingredients of Byzantine remedies. In general, however, it is often easy to overlook their presence in pharmacology. Notwithstanding, John Riddle cites as an example a Western pharmacopoeia in a ninth-century antidotary in the manuscript St Gall 44, in which many ingredients, familiar from the Byzantine pharmacopoeia also, can be shown to have none other than an Eastern provenance.[40] In spite of such antecedents, the few examples cited above appear to occur too rarely to have been cited in the great *Glossarium ad Scriptores Mediae et Infimae Graecitatis* published by du Cange in 1688.

Contrasts

At the time the remedies in *Xenonika I* were set down, Arabic medicine was generating remedy texts of its own, advancing all the while in therapeutico-pharmaceutical expertise. It seems instructive to compare two hospital remedy texts, the one the Byzantine *Therapeutikai*, the other the epitome of Sabur ibn Sahl's *Dispensatory* from the Perso-Arabic 'Adudi hospital in Baghdad here referred to as the *'Adudi recension*. Both works have origins in the eleventh century.

Sabur ibn Sahl (d. 869),[41] a Persian Christian (perhaps Nestorian), is said to have attended the Gondeshapur medical school.[42] He was later appointed court

physician to the caliph al-Mutawakkil (regn. 847–861) in Baghdad. Of his works little is preserved. He mainly compiled a *Dispensatory* of which survive three versions: a large apparently now lost, a medium equally lost, and a small one preserved in a unique manuscript.[43] The earliest mention of the large recension is said to be that by the Persian medical encyclopaedist ar-Razi (d. ca. 930).[44] The *'Adudi recension* was a "revised, rearranged and abridged edition" of the *Dispensatory*.[45] Its title is translated by its editor Oliver Kahl as follows:[46]

> The dispensatory of Sabur according to the copy of the 'Adudi hospital, (being) a synopsis of Sabur's dispensatory on the composition of drugs in sixteen chapters.

It is, as Kahl notes, "a clinical recension".[47]

In the case of the *Therapeutikai*, we have seen on the evidence of its heading that it was compiled from various sources for hospital use. The *xenôn* remains unidentified and the compiler(s) are unknown, save for the reference in the introductory paragraph to the text as the work of "various medical personnel in accordance with the defined procedure of the *xenon*".

The most immediate difference between the Greek and the Arabic texts is their structure and its implications in practical use.[48] The order of remedies in the *Therapeutikai* is governed by the *a capite ad calcem* sequence, whilst that of the *'Adudi recension* of sixteen chapters is governed by categories of drugs employed for common affections: thus, pastilles, oils, beverages, enemas, etc., concluding with treatments for teeth and gums, and ending with a chapter on *Uses and properties of animal parts*.[49] The relatively loose construction of the *Therapeutikai* is suitable for use by a competent physician, pharmacist, or even "lay person", whilst that of the *'Adudi recension* appears to require rigorous adherence to the recipes by "professionals".

Although most their remedies are on the whole for minor medical conditions, both the *Therapeutikai* and the *'Adudi recension* have a wide range of medicines suitable for what is now termed a general hospital. However, the range of remedies in the two works suggests different sizes of hospitals. That of the *xenôn* for which the *Therapeutikai* was prepared is unknown, and the title of the text provides no satisfactory clues. It is worth noting, however, that even a small institution such as the twelve-bed conventual Lips *xenôn* was served by three physicians, an assistant, a nurse, a pharmacist and two apothecaries.[50] Hospitals in the early Arabic world, as for them, were of a considerable size in terms of available beds.[51] The al-'Adudi hospital in Baghdad, built in 981, is reputed to have had at one time twenty-eight physicians, probably inclusive of junior and senior physicians.[52] This pre-supposes a medium sized general hospital by most modern standards (excluding single-speciality hospitals).

Comparing Byzantine and Arabic texts

Ibn Sahl's text was compiled some two hundred years after Arabic medicine had begun to absorb Graeco-Byzantine medical texts. Is there any evidence that the

'Adudi recension was still influenced by Graeco-Byzantine medicine? There are references to Hippocrates, Dioscorides and Galen that suggest at best familiarity with Graeco-Byzantine medicine,[53] but not necessarily influence from it. At the time of the *'Adudi recension*, indeed, Arabic medicine had gone a long way from the translation period and the assimilation of Greek medicine.

The German historian of Islamic medicine Manfred Ullmann is somewhat dismissive of pharmaceutics in Arabic, particularly in comparison with Galen's major works on drugs. He observes that the bibliographers[54]

> . . . recognise more than a hundred authors who wrote about *materia medica*. But only a few of these works are original independent achievements . . . hardly in any other branch of literature has so much been copied as here.

Peter Pormann and Emilie Savage-Smith are kinder in their reckoning; they note the introduction of new medical substances, new techniques and new equipment in this period of Arabic medicine.[55]

The texts discussed in earlier chapters suggest a fairly low-level medicine in Byzantium and a need for caution in defining the "medieval hospital". Michael Dols voices this caution. "The medieval hospital", he says of both Byzantine and Islamic hospitals, "was basically a civilian charitable institution, which more closely resembled a present day convalescent or nursing home".[56] This is a far cry from the exalted view of the first hospitals by earlier historians. Recent scholarship casts substantive doubts on other hitherto accepted historical "facts". Did the renowned Gondeshapur hospital, the supposed model for subsequent Islamic hospitals and reputed to be an advanced centre of excellence, exist or was it no more than a local infirmary?[57] Doubts, too, exist among some scholars about the claims for the advanced nature of the twelfth-century Pantokrator *xenôn* in Constantinople based on its surviving *typikon*. Despite these misgivings, the extant dispensatories attributed to both Byzantine and Islamic hospital use are factual enough to justify a careful comparison of their contents as a guide to the medicine practised in these institutions.

In so brief a summary of the transmission of medical knowledge from Byzantium to the East, any reverse influence (that is, from East to West) is of relatively short-lived significance. The hospital remedy texts of earlier chapters reflect Graeco-Byzantine medicine alone. The first text of this chapter shows signs of Arabic influence.

Table 7.1 Greek and Arabic therapeutic works of the ninth to twelfth centuries

Origin	*Century*	*Text*
Byzantium	9th	*Therapeutikai iatreiai* [Anonymous]
	11th-12th	*Prostagai* [Anonymous]
Arabic World	11th	ibn Sahl, *Dispensatory* (*'Adudi hospital recension*)[58]
	11th-12th	at-Tilmid, *Dispensatory*[59]

It is worth briefly comparing the *Therapeutikai* and the *Prostagai* texts with two Islamic hospital remedy texts before embarking on the study of the *Xenonika I* and *Xenonika II* remedy texts.

Each of the works records remedies for use in hospitals or written by one or more hospital physician(s). The Byzantine ones are anonymous compilations of unknown local provenance whose titles-cum-prefaces record their use in hospital practice. The works in Arabic are by attested figures who had at some time in their working lives been senior hospital physicians.[60] Of the two compilations, ibn Sahl's *Dispensatory* remained in use for some three hundred years until superseded by that of at-Tilmid.[61]

John Scarborough suggests that comparison of Ibn at-Tilmid's *Dispensatory* with ibn Sahl's *Dispensatory* demonstrates an evolution of Arabic pharmacy.[62] No similarly confident conclusion can be reached about the Byzantine texts that essentially reflected the Galenic influence of ten centuries earlier as modified by the scholar physicians of Byzantium and by practical experience in use. By the time the translation period drew to a close,[63] there was an increasing corpus of native Arabic medical and pharmaceutical texts, expressive of a developing local science that in due course was to have a reciprocal influence in Byzantine medicine.[64]

There is no reference within the body of any of the Greek works to either hospital or patient unless in the *Prostagai* where some mention is made of the "recumbent patient", which could, however, as well evoke a domestic setting. There are no indications of the criteria for the texts' compilation except the applicability of the remedies to common affections. The intended purpose was described at the head of the remedy in each of the Byzantine texts under review. This contrasts with the Arabic texts where in some instances the heading not only is minutely descriptive but claims a remedy as suitable for the treatment of more than one disease. Clear simple titles, however, preponderate. These variations may reflect the sources: Arabic, Persian, Greek and Syriac. Not a few Byzantine remedies, in contrast, are owed to earlier texts in the corpus of Graeco-Byzantine medicine, some potentially predating Galen.

The comparative complexity of the remedies is difficult to assess, not least because of the problem of interpreting the diagnostic base in a medicine foreign to Western modern medicine. This difficulty becomes clear in the Arabic multipurpose remedies, particularly in the *'Adudi recension* (nine examples compared to two or three in at-Tilmid's text).

Both Greek and Arabic texts carry the same essential information, the ingredients required for each remedy, sometimes with alternatives. Not all Byzantine remedies give details for preparation of remedies or quantities of ingredients; these are for the physician's judgement. In contrast, the two Arabic texts give every indication of the "editing hand" of their respective compilers, ibn Sahl and at-Tilmid. There is generally a stricter prescription of quantities of ingredients. The value of the Byzantine approach is that the physician can make judgements on quantity of ingredients according to the patient's age, weight and constitution; the range of initial quantity will be a matter for the physician's experience and knowledge.

A particular feature of the *Prostagai* is the modification of remedies in transmission by addition to, or deletion of, content by the individual copyist. In contrast, both of the two Arabic works are extant in several manuscripts which differ most evidently in the omission or inclusion of whole remedies. The *'Adudi recension* is described in Kahl's stemma as a "revised, rearranged and abridged edition by the physicians of the 'Adudi hospital".[65]

Neither Greek nor Arabic texts include remedies for affections specific to women, thus suggesting that these are matters for private domestic treatment by experienced women attendants.

The Byzantine pharmacopeia was built on foundations laid down by Galen and his predecessors. The developing Arabic pharmacopeia was, in turn, influenced by Syrian and Persian pharmaceutics, resulting in the development of an expertise, from the early *Book of treasure* onwards, in pharmacology.[66] The impression remains, however, that the works of ibn Sahl and at-Tilmid were not designed solely as hospital texts, chancing only to have been written by physicians serving in institutions that were advancing in the provision of patient services in the major cities and originating in the earlier hospices developed by Syriac-speaking Christians for the pilgrims and the sick.[67]

The Byzantine *xenôn* remedy texts, on the other hand, have a better claim to having been compiled for hospital use, not least in their relative brevity and aptness for easy reference by experienced physicians and pharmacists. Their descriptive headings or "titles" may well have been a copyist's addition at some stage in their transmission but describe well enough a collection of remedies for institutional reference and use that are economical of ingredients and preparation. Their order, too, lends itself to easy reference in contrast to the two, superficially more diffuse, Arabic works.

The Persian element

A Persian element in the remedy texts *Xenonika I* and *II* is evident in some titles or *incipits*.[68] An "antidotarium translated from the Persian" is the most obvious of these,[69] as are the "treatments from various Persian medical books".[70] The *Xenonika I* and *II* introduce some Arabic ingredients as well as a recipe for a perfume by "he of Baghdad" at the close of the *Xenonika II*.[71] The facility of the Persian pharmacists in the preparation of perfumes and unguents was matched by the *myrepsoi* of Constantinople.[72] The language used by the Persians for their treatises was Arabic, the *lingua franca* of that time.

From the fourteenth century, for almost a hundred years, the Persian influence on Byzantine medicine and pharmacology (and also astronomy) is apparent, most obviously in borrowings and translations, in the works of Symeon Seth, Nicholas Myrepsos and Constantine Melitiniotes.[73] There is also extant the translation of George Chioniades (d. end of the thirteenth century): "ἀντίδοτοι ἐκ περσικῆς κομισθεῖσαι καὶ ἐξελληνισθεῖσαι παρὰ τοῦ χιονιάδη κυροῦ γεωργίου" (*Antidotes culled from Persia and translated into Greek*).[74] Chioniades lived for a time at the court of Trebizond, on the trade route from Persia; had travelled in Persia; and

brought back with him technical books, chiefly on astronomy. His transmission of Persian scientific knowledge was undoubtedly one of the means of its manifestation in Byzantium in this period, called by Vogel "a Perso-Byzantine renaissance".[75] But Evaggelia Varella, in the summary of a paper on oriental elements in Byzantine medicine, remarks that "these influences were rather fragmentary".[76] This perhaps is true of *Xenonika I* and *Xenonika II* judged by their relatively few Eastern medicinal ingredients in the remedies.

The codex

There is no evidence for a date of the original compilation of *Xenonika I* and *Xenonika II*. *Xenonika I* contains unfamiliar terms, ζουλάπιον (*zoulapion*) or χηράλειμα (*chêraleima*), for instance, that suggest a late usage.[77] *Xenonika II*, too, gives no evidence of its original date, other than the signs of Western influence evident in ἀπὸ λατινικὸν βιβλίον εἰς ἰσχίον and ἀλειφὴ σαρκωτικὴ λευκὴ λατινική.[78] Both *Xenonika I* and *II* contain a number of remedies from the Persian translated into Greek – as do also other works contained in the same manuscript *Parisinus graecus* 2194 – which might be significant for the date or period of compilation of the texts.

The greater part of the codex *Parisinus graecus* 2194 (ff. 3r–400r) is made up of books V–XIV of the *Libri medicinales* of Aetius, "plutôt un extrait qu'une copie".[79] This amounts to over three-quarters of the 464 folios. The first of the subsequent brief pharmaceutical texts begins on the verso of the last folio of Aetius' text and is attributed to the fourteenth-century Constantine Melitiniotes. The next text, entitled ἀρχὴ τὰ περὶ γλυκυσμάτων (*Introduction to the effects of sweetness*), may be a continuation of the first, perhaps in error separately catalogued by Henri Omont.[80] The fifth text in the manuscript is the *De remediis* of Theophanes Chrysobalantes;[81] and the seventh, the *Xenonika I* and *Xenonika II*, each preceded by a *pinax*. The last two items are a remedy collection from Persian and a collection of medicaments by Euphemios and Filippos Xeros. These nine texts, together with the books of Aetius, form a useful addendum of practical workaday reference as much for a physician as for the needs of, for example, the monk in a remote community, or the traveller in distant parts.

On the presumption that the contents of the codex were copied no earlier than the thirteenth or fourteenth century (on the evidence of the inclusion of Constantine Melitiniotes' work), a purpose of personal utility is very apposite to all the contents. This conjecture supports the proposition above that it was a compilation gradually assembled in its present form for personal use. Henri Omont describes the codex as fifteenth century, as much, it may be assumed, on the *terminus ante quem* evidence as on that of the hand found in it.[82]

The dates of *Xenonika I* and *Xenonika II* are more difficult to determine. That *Xenonika I* has a relatively small number of unfamiliar ingredients serves to place the text at any point in time from, say, the twelfth century up to the fifteenth century. The occurrence of a number of multi-ingredient remedies in the text seems to corroborate a late period text.

Description of *Xenonika I* and *Xenonika II*

Both *Xenonika I* and *Xenonika II* are distinguishable from the general run of Byzantine remedy texts by elements of their content, not least by their "titles". These, to some degree, are validated by references to *xenônes* and their physicians among the remedies. Each title is economical in its description of the texts, unlike the titles of the *Prostagai* and the *Therapeutikai* that inevitably introduce an element of doubt about their reliability. Whether later additions or not, it remains probable that the titles were recorded in the manuscript with knowledge of their provenance. The *Xenonika I* and *Xenonika II* are each preceded by an index (*pinax*),[83] but neither index is entirely reliable. The index for *Xenonika I* is set out in five relatively well-spaced and defined columns, the number assigned to each chapter being above each paragraph title. It falls mid-folio, between the close of the preceding text and the beginning of *Xenonika I* itself and fits comfortably on the page without constriction. Its hand corresponds to that of the text itself, as does each individual chapter number.[84]

For *Xenonika II* the index under the title comprises three compressed columns. It includes four short titles for chapters not in the text and is followed by eight lines comprising a remedy for a plaster.[85] This does not appear to be part of the text, for the first chapter beneath a second title ξενονικά corresponds to the first index entry. It is almost as if, on completion of the index, the copyist then altered and added to, or took from, the preceding index.

Were the indices for *Xenonika I* and *Xenonika II* added after the copying of each text? That for *Xenonika I* sits comfortably; that for *Xenonika II* appears compressed, although that appearance may be illusory. It is possible that they were added after the copying of the text in a space set aside for them; in the case of *Xenonika II*, that might explain the insertion of the extraneous "plaster" remedy, to fill the available free space.

The two works are, *prima facie*, authenticated by their respective titles. Both titles in the manuscript are characteristic of additions after the initial copying, particularly that in *Xenonika II* which is written slightly aslant the horizontal. They are emboldened in both size and shape but appear to be in the same hand as the body of the text. There is, naturally, insufficient material for comparison of the hands to affirm this proposition beyond reasonable doubt, and it is just as probable that the titles were added at a later time. Either a *xenôn* tradition attached to these two texts, whether or not founded in fact, or the references to a *xenôn* and its *aktouarios* in *Xenonika I* initiated the titles. An echo of a *xenôn* is found at f. 441r, ll. 5–6, the lines preceding the *xenôn* ascription of *Xenonika I*. These lines contain the *incipit* of the *Therapeutikai* and directly follow part of the text of the *De remediis* of Theophanes Chrysobalantes. It goes no further than the briefest version of chapter 1 of the *Therapeutikai* and stops abruptly.[86] Although that may be construed as no more than a copyist failing to recognise where the *De remediis* text ended in his exemplar, it might equally imply that many *xenôn* texts went unrecognised because their titles were lost in transmission.

It is impossible to judge whether or not the manuscript *Parisinus graecus* 2194 contains the first assemblage and copying of these two *Xenonika* texts. Nonetheless, if the title of each was a later addition, either the compiler, a later copyist, or the user of the text knew, or by some means presumed, that these two texts originated from *xenônes*, or thought it desirable to designate them so. We shall see that there are few indications of a *terminus post quem*, since the named individuals to whom remedy recipes are attributed are unknown.

Order of remedies

Order of remedies in *Xenonika I* is not apparent. *Xenonika II* is, as we shall see, initially ordered by groupings. It is perhaps a defect of the modern mind to seek to impose, on lists in particular, the order that a printed book – prepared, edited and proof-read with care – imposes. Self-evidently, manuscript folios do not generally lend themselves to this expectation except where an ordered and recognised text has been copied; even that may be subject to major omission or alteration. Here, however, a minor and ordered text, probably recorded for personal use, has had, it is suggested, remedies added to the original manuscript by the owner or user so that in subsequent copying the original text and the additions are at first sight read as a continuous whole.

A discussion of *Xenonika I*

Up to this point, we have discussed both *Xenonika I* and *Xenonika II* jointly, not on any presumption that they are of common origin, but simply because they appear together in the same manuscript and give indications that they are themselves relatively late texts.

The title of *Xenonika I*, δυναμερὸν ξενονικὸν διὰ πείρας (*dunameron xenonikon dia peiras*), implies that the text originated in a Byzantine *xenôn*. But is it strictly a *xenôn* remedy text, or simply a random collection of recipes, extracts from Hippocrates, Galen and other earlier writers, as well as instructions on how to make up oral "contraceptives" and cosmetics?[87] This combination suggests a kind of day book of useful remedies noted down as, perhaps, efficacious or potentially useful. The collector-cum-scribe clearly had medical knowledge, but whether the copy we have in this codex is in turn a copy, perhaps of the archetype, is unknowable. Why should anyone want to copy so eclectic a document?

In attempting to answer these questions, the meaning of ξενονικόν needs closer examination. We proposed earlier that the word might be a *hapax legomenon*. The suffix-ικος denotes "pertaining to", in this case a *xenôn*, implying that the *dynameron*'s contents are based on remedies used in *xenônes*. But was the text specifically associated with a single unnamed *xenôn*, or was it no more than a personal collection of remedies collected from *xenônes* that has remarkably survived in a fifteenth-century manuscript?

That the text includes eight remedies said to originate from an unknown *Mauraganos xenôn* (if that was its name) is no evidence of the whole text being a record

of recipes used there. The eight *Mauraganos* passages, dispersed through the text,[88] are comparable to the Mangana passages of the Vaticanus graecus 299 (2) in their ascription of a few remedies to a named physician of a *xenôn*.[89] Of the eight remedies attributed to "the Mauraganos" in the *Xenonika*, three are of the *oktarios of the Mauraganos* and two of *the aktouarios/oktarios Michael of the Mauraganos*. Similarly, there are two remedies in the text attributed to a George Bekkon. In one of them this George Bekkon is called *the very wise, learned and knowledgeable*. Was *Mauraganos* the patronymic of Michael the *aktouarios/oktarios* or the name of a *xenôn* on analogy with *Theodore the Mangana Hospital physician* in codex *Vaticanus graecus* 299?[90] The following chapter will deal with this hitherto unrecorded *xenôn*.

The *Xenonika I* is made of 428 lines, excluding the index and title. The number of words is some 4,500. The title of each paragraph in the table of contents is not always easy to locate within the text, nor is the chapter number in the margin always positioned in relation to the title of the paragraphs, strengthening an argument for their entry after the copyist had completed the text, or even by a later user of this manuscript. The titles are best distinguished by the use of the double point (:) at the close of the preceding item, and a small gap before the next one. The titles are generally short and to the point, with the exception of § 59, 72 and 74, whose titles are reminiscent of the numerous cures claimed to be effected by panaceas in "quack" medical literature of more recent centuries.

Order of any kind – alphabetical, *a capite ad calcem* or by subject matter – is impossible to distinguish, although a few groups of remedies are evident. A group of four potions for epilepsy (§ 18–21), for example, stands out. This lack of a discernible order of remedies is a feature of the *Therapeutikai* that Edouard Jeanselme compared to a day book of remedies in which entries are made from time to time.[91] The concept of a day book is in some sense a modern imposition on a past age, but not unconvincingly so.

Xenonika II: a companionable contrast

"Two contiguous *xenôn* remedy texts in a manuscript; compare and contrast" might be an appropriate examination topic. Both share the same hand, and both are attributed to *xenôn* usage in their superscribed titles, with no hint of the hospitals' names or locations.

As for order or groupings of remedies in *Xenonika II*, initially some indications are apparent, thus:

§ 1–4 cataplasms
§ 5–9 enemata
§ 10–17 medicinal potions

Thereafter, from § 18–33, there is a miscellany that begins with σύνοψις σὺν θεῷ τῶν βοηθημάτων (*sunopsis sun theô tôn boêthêmatôn*, "Synopsis of remedies, with God's help"), and ends at a group that begins at § 34, principally about gastric

affections. There follow five remedies (§ 40–44), broadly classifiable under the heading of affections of the abdomen. Seven random remedies follow (§ 45–51), touching on mentagra, hip joint affections, sciatica, skin care ointment (twice) and a formula εἰς πιασμόν (*eis piasmon*, "to make fatter[?]"). There remain two remedies, unnumbered, one to aid a barren woman with pains in her womb, the other for a plaster for "ridding" a person of (the consequences) of a sword stroke, being also efficacious for all injury.[92]

This careful comparison of text and pinax discloses a disparity between the two. In the pinax are recorded fifty-two remedies, compared to a total of fifty-four in the text. The disparity begins at § 9, corrects itself at § 11, and then after § 16 the failure of text and index to correspond continues throughout. A further complication lies in the numbering of the remedies in the text. On f. 448v, ll. 9–10, the scribe omitted to number a very brief item between remedies six and seven (*in margine*, στ and ζ). This omission tends to confirm that the numbering of remedies was completed by the scribe after the text had been recorded.

The pinax (f. 448r, ll. 2–19) throughout is difficult to decipher, and at its close it suffers offset overprint from the previous folio. The recipe for a plaster for sufferers from dysentery and those who pass their food undigested that follows (ll. 20–27) conforms to the first four remedies numbered in the margin from one to four in *Xenonika II* – that is, cataplasms (plasters or poultices). Yet, this cataplasm remedy is unnumbered and followed by a space sufficient for the scribe to insert in large majuscule ΞΕΝΟΝΙΚΑ (*Xenonika*).

Matthew, his pupil and a Latin translation

As so often with most herbal remedies from these centuries, the rationale underlying the ingredients used is rarely obvious. Consequently, little is to be gained in examining the remedies individually, with the exception of two groups whose intrinsic interest lies in the description in the text of their purported sources.

The first group is of remedies used by a certain Matthew, βοήθημα τοῦ ἡγεμόνος ματθαίου χρόνου μ (*boêthêma tou êgemonos matthaiou chronou 40*, "remedies of the hêgemôn aged 40"),[93] and εἰς τῶν μαθητῶν χρόνου κ΄ ἢ κε΄ (*eis tôn mathêtôn chronou 20 ê 25*, "Matthew's unnamed pupils aged between 20 and 25").[94] Both experience *suffering in the head*.[95] Matthew also suffers from pain in his trunk and tibia (shinbone) − a curious combination of sites, it might be thought.[96] The remedy for him is specified as being *warming* and restorative *of a moist stomach*.[97] Each remedy is a prescription for yellow pills,[98] the ingredients for which are the same, save that the dosage for the younger man is lower than that for his ἡγέμων (*êgemôn*).

The principal difficulties in the contents of these two remedies are the nature of the symptoms recorded, and the meaning of *hêgemôn*. Both master and pupil at first sight appear to suffer from headaches, but the ingredients give no clue to the real nature of their suffering, and we may not assume that the literal periphrasis *he suffered in respect of his head* means headache, although that may have been a symptom.[99] That doubt is reinforced by Matthew's other symptom of *pain in trunk and tibia*, a symptom too general to be construed in more accurate terms.

We need, however, to pursue the significance of these two remedies in the setting of the whole text of *Xenonika II*. The word *êgemôn* is a word that denotes *leadership*, principally in a regal or monastic sense. It may also have the tutorial sense of *princeps juventutis*, but, given the age of the younger man, that may be doubtful. Of the recognised translations, that applicable to a religious foundation seems the more likely. Was Matthew known to the compiler, or were § 23 and 24 copied from some source available to that compiler? A more radical alternative is that the whole text originated in a monastic sick bay. There is no verifiable evidence for this, albeit that the greater part of text is made up of remedies for commonplace affections that arguably reflect the enclosed life of a monastery or a medical monastic service to a local population.

A counter-argument to the hypothesis of a monastic origin lies in the penultimate remedy "for a barren woman who does not bear a child, and also suffers pain in her womb".[100] The remedy, a compound of herbs with measurements of quantity, is to be taken morning and evening. This remedy as well as the very last one in *Xenonika II* for the extraction of a sword or perhaps an arrowhead from a wound and also beneficial for every wound[101] are not numbered as are the other fifty-two remedies. These two last remedies, although appearing to be a continuous part of the text in the codex, suggest that they were late and casual additions to an original text.

We must be cautious about accepting this monastic hypothesis and treat with equal caution the second pair of remedies that call for study that might suggest a similar conclusion. The two remedies, § 48 and 50, have these headings:[102]

> ἀπὸ λατινικὸν βιβλίον εἰς ἰσχίον (*apo latinikon biblion eis ischion*, "from a Latin book, for [the] hip joint")

and

> ἀλειφὴ σαρκωτικὴ λευκὴ (*incert.*) λατινική *(aleiphê sarkôtikê leukê latinikê*, "a white ointment beneficial to flesh, from Latin").

What were these Latin sources? A search for them would be of little value, particularly given the brevity of these passages and the lack of comparative clues. With four ingredients in each remedy and minimal instructions on preparation, their source is likely to remain unknown. There is, however, a single clue to their likely date in § 48 in which one of the four ingredients is τούρπετε (*tourpete*).[103] *Xenonika I* uses this herb, and it is recorded in an interpolation in Dioscorides.[104] It seems to have been unknown in Roman medicine, and its source was almost certainly in the East.[105] It is likely therefore that its medicinal use in Byzantine medicine began in, or around, the twelfth or thirteenth centuries.

The disparities between *Xenonika I* and *Xenonika II* are of a lesser degree than the observations in this chapter might suggest. Both are practical but scarcely comprehensive in the sense of being handbooks for a reasonably broad spectrum of disease and the complaints and disorders of a daily practice. The contents of *Xenonika*

II are nearer to that description. Its first seventeen paragraphs fall into three groups: cataplasms, clysters and liquids. Thereafter, the remedies, interspersed with recipes from the *Mauraganos xenôn*, are of a more miscellaneous nature not open to easy categorisation. The same can be said of the works discussed in earlier chapters, suggesting that the remedy texts that have come down to us have been compiled over time, perhaps as and when each entry had been proven in use.

The *Xenonika I* also contains paragraphs on general medical topics, including signs and symptoms (§ 7, 8 and 9), herbs and urines (§ 16 & 17), as well as Galen on appetite (§ 35). Of the remedy texts considered in earlier chapters, none has included remedies for epilepsy, but we find five chapters on that topic (§ 18–21 and 25) in the *Xenonika I*. To these we must add the seven paragraphs attributed to the *Mauraganos xenôn* or its *oktarios*/*aktouarios*. The last paragraph, numbered 77, is that of *a fragrant ointment that the Baghdad perfumer devised*.[106] It uses nineteen ingredients, principally aromatic, and shares twelve of them with the preceding recipe, the heading of which reads, *A fragrant ointment devised by the oktarios Michael of this Mauraganos for the lady from abroad − [suitable] for a mother*.[107] We may see the use of aromatics as principally a feature of Islamic medicine.

On so tenuous a thread, we may suppose that aromatics, medicine and pharmacy were a part of an Eastern tradition, and that these last two preparations of *Xenonika I*, unless late additions to the putative manuscript from which *Xenonika I* and *II* were copied, reflect an Eastern influence in Byzantine pharmacy. This influence had been present from earlier centuries in the form of ingredients imported to Byzantium for medicinal use. Many of these plants were known to, and recorded by, Dioscorides in his *De materia medica* in the first century.[108] Reference to Dioscorides may make the reader reflect on what progress had been made − or not − in pharmaceuticals in the centuries up to the time of these *xenôn* remedy texts.

Notes

1 The quotation is reputed to be a Chinese proverb.
2 Wallis 1995: 109.
3 *Xenonika I* begins at f. 441r, l. 27, preceded by a title (l. 7) and a pinax (ll. 8–26), and ending at f. 447v. *Xenonika II* begins at f. 448r, again preceded by a title (l. 1 repeated at l. 28), a pinax (ll. 2–19), and a recipe for an emplaster (ll. 20–27), and ends at f. 450v.
4 The term is not attested from the fifth-century Byzantine lexicographer *Hesychius Alexandrinus*, *Lexicon* (ed. Latte 1953 and 1966, vols. 1 and 2; Hansen 2005, vol. 3; Hansen and Cunningham 2009, vol. 4) to the French Renaissance erudit Henricus Stephanus (Henri Estienne [1528 or 1531–1598]) in his *Thesaurus Graecae Linguae* of 1572 (see 2.1127) or even later in the *Glossarium ad scriptores mediae et infimae graecitatis* published in 1688 by the French Byzantinist du Cange (see du Cange 1688: 1014).
5 This aspect of the translation of *xenonika* was brought to my attention by Professor V. Nutton and Mr N. G. Wilson to both of whom I am greatly obliged.
6 See *Parisinus graecus* 2194, ff. 441r, l. 7, and 448r, ll. 1 and 28, respectively.

7 For an example of such a discursive section, see the section *De urinis* in *Xenonika I* (f. 442r, l. 23-v, l. 32), which forms a small treatise in its own right.
8 Omont 1888: 212.
9 Including the *Synopsis de remediis* of Theophanes Chrysobalantes in ff. 407v–431v (Sonderkamp 1987: 156–157).
10 See the titles of these two passages: ff. 400v. ll. 1–2 (*Antidotes translated from the Persians to Greece by the physician Constantine Melitiniotes from Constantinople*), and 450v, l. 10 (*Therapies from several Persian medical books*).
11 For detail of this translation movement as it affected medicine and pharmacy, see Pormann and Savage-Smith 2006: 24–27. For the broader intellectual and social context, see Gutas 1998, and Saliba 2007: 1–129.
12 In Mercati and Franchi de' Cavalieri's 1923 catalogue of Vatican Greek manuscripts *graeci* 1–329 alone, codices 277, 280, 282, 292, 293, 298, 299 and 300 include Arabic plant names, lexical notes *in margine*, and Graeco-Arabic translations of medical. On such lexica, including those referred to here, see Touwaide 2000. The closing paragraphs of *Xenonika I* in the Paris codex *graecus* 2194 exemplify that theme. The first (f. 447v, ll. 29–34) is entitled *A fragrant ointment . . . for the lady from another country*, the other (f. 447v, ll. 24–28) *A fragrant ointment that the Baghdad perfumer devised*.
13 Touwaide 2002a: 45.
14 For such dating, see recently Cavallo 1980: 230, followed, among others, by Ieraci Bio 1989: 166n22 and 194 (stressing that the manuscript is written on Italian paper). More generally about the manuscript, see also *Ibid.*: 147, 160, 175, 226–227, 232 and 238. For its content, see, more recently, Bennett 2013: 80, 89–90, 92–93.
15 See, for example, ἀπό governing the accusative case (for instance f. 450r, l. 27: ἀπὸ λατινικὸν βιβλίον). On this usage, see Jannaris 1897: 373, no. 1517, and, more recently, Bortone 2010: 204, 211.
16 See f. 441v, ll. 11–22, 22–24 and 24–25, respectively.
17 *Corpus Hippocraticum, Aphorismi*, VII, 87 (ed. and Fr. tr. Littré 1839–61: 4.609, ll. 1–3; ed. and Engl. tr. Jones 1931: 216, ll. 13–15).
18 See f. 445v, ll. 12–15.
19 See f. 441r, l. 15 (table of contents) and ff. 444r, l. 17–445r, l. 18 for § 35, and 447v, ll. 17–19 for § 75.
20 See ff. 441r, l. 11 (table) and 442r, ll. 16–17 for § 15, and ff. 441r, l. 16 (table) and 445r, ll. 22–26 for §37.
21 See ff. 441r, l. 25 (table of contents, where the paragraph is numbered 71) and 447r, l. 29–447v, l. 7.
22 See ff. 441 r, l. 20 (table of contents) and 446v, ll. 14–17.
23 See ff. 441r, l. 24 (table of contents, where the paragraph is numbered 70) and 447r, ll. 25–29. The nine ingredients of the recipe include such substances as brimstone, pepper and squill.
24 See ff. 448r, l. 17 (table of contents, numbered 40) and 450r, ll. 30–31 and 31–33 (in the text, numbered 50 and 51).
25 See ff. 448r, l. 9 (table of contents) and 449v, ll. 14–17.
26 See f. 449v, ll. 20–25.
27 Costomiris 1890: 170–171.
28 Kousis 1928: 79.
29 Sonderkamp 1987: 156–157.
30 Duffy 1997: 15n2. See also Touwaide 1997: 46–47.
31 Considering the size of the manuscript, Mondrain 2003: 367 made a similar hypothesis of a manuscript produced for personal use. It may be significant that the codex was owned by the late Byzantine physician Demetrios Angelos, who assembled a collection of Galenic manuscripts. See Mondrain 2003: 369n5 for this manuscript specifically and the whole article about Demetrios Angelos, his biography and the manuscripts he owned, copied and annotated (with previous literature).

32 It is probably not insignificant that the manuscript is from Southern Italy. See principally Cavallo 1980: 230; and Ieraci Bio 1989, especially 232 and 238.
33 See Barbour 1981: 28 and table 102, dated 1491–1492.
34 See ff. 441r, ll. 8–26 for *Xenonika I* and 448r, ll. 2–19 for *Xenonika II*.
35 Hippocratic pharmacotherapy has been the object of repeated studies. For a recent inventory, see Aliotta et al. 2003.
36 On the range of substances used in Galen's pharmacology, see Israelson 1894.
37 *Parisinus graecus* 2194, ff. 445r, l. 30–445v, l. 3.
38 *Parisinus graecus* 2194, ff. 445v, l. 30–446r, l. 3.
39 In *Parisinus graecus* 2194, see, for example, f. 443r, ll. 21 (*aklimelek*), and 4 and 18 (*taronnitzin*).
40 Riddle 1965.
41 For his biography, see Kahl 2003: 11–12.
42 On this school, see Richter-Bernburg 2004a.
43 Ed. Kahl 2003.
44 Kahl 2003: 13n45ctd.
45 Kahl 2003: 12n45.
46 Kahl 2009: 6.
47 *Ibidem*.
48 This without mentioning that the 100 remedies in the *Therapeutikai* contrast with the 292 remedies in the *'Adudi recension*.
49 See the summary of the chapters in Kahl 2009: 9.
50 See the *Lips typikon*, 50 (ed. Delehaye 1921: 134), with the commentary *ibid.*, 184.
51 On hospitals in the Arabic world, see, recently and for example, Micheau 1996; and Pormann and Savage-Smith 2006: 95–101.
52 See Pormann and Savage-Smith 2006: 54 and 98.
53 Kahl 2009: 11.
54 Ullmann 1978: 103.
55 Pormann and Savage-Smith 2006: 120.
56 Dols 1985: 142.
57 Pormann and Savage-Smith 2006: 20–21.
58 Ed. Kahl 2009.
59 Ed. Kahl 2007.
60 Ibn Sahl was at the time director in charge of the hospital in Gondeshapur (see Kahl 2003: 120). Ibn at-Tilmid was in later life the chief physician of the 'Adudi Hospital in Baghdad for which the eleventh-century recension of ibn Sahl's dispensatory had been compiled.
61 Ibn at-Tilmid's *Dispensatory*, notes Kahl 2007: 5, "became the pharmacological standard work in the hospitals and apothecs of Baghdad if not the Arab East, replacing, after almost 300 years, the hitherto indispensable dispensatory of Sabur ibn Sahl". For ibn Sahl's *Dispensatory* (short version), see Kahl 1994.
62 Scarborough 2008.
63 Approximately from the eighth to the tenth centuries, or "turn of the millennium" (Gutas 1998: 151).
64 See the pioneering study of Kousis 1939. For a recent analysis of medicine generally speaking, see Touwaide 2002a. For more specific studies of such topics as urology, for example, see Touwaide 2004b; Lamagna 2003 and 2006; and, for materia medica, see Touwaide 1991b, 2002b, 2008b; and McCabe 2009. Such a shift in the transmission of information was by no means limited to medicine but also included such other scientific disciplines as astronomy (see for example Tihon 1960 and 1987; King 1994; and Tihon 2000) and mathematics (for example Allard 1978) and even literature with with the translation of the Arabic tales *Kalila wa Dimna* into Greek under the title Στεφανίτης καὶ Ἰχνηλάτης (*Stefanitês kai Ichnêlatês*) (Greek text in Sjöberg 1962, with a study in Condylis-Bassoukos 1997). See also Mavroudi 2006.

65 Kahl 2007: 5.
66 See Prioreschi 2001: 286.
67 Horden 2005: 369–370; and Pormann and Savage-Smith 2006: 21.
68 On the abundance of Persian terms in the pharmaocopeias of non-Persian writers, see Elgood 1953: 317.
69 See *Parisinus graecus* 2194, ff. 400v–403, l. 7.
70 See ff. 450v, l. 10–453v.
71 See f. 447v, l. 24: ὁ Βαγδαΐτης (*ho Bagdaïtês*). On the use of perfumes in therapeutics, see Scarborough 1984b: 232. The purpose of including a perfume in a remedy list for various affections may equate to the Egyptian use of κῦφι (*kuphi*) whose aromatic function, as Scarborough notes from the seventh book of Paul of Aegina, *Epitome medicinae*, was a minor one; their use was primarily that of drugs "to be taken internally for the production of accumulation of mucus". Scarborough's reference is to *Paulus Aegineta*, *Epitome medicinae*, 7, 22, § 1 (ed. Heiberg 1921–24: 2.393; Engl. tr. Adams 1844–47: 3.599). It might be significant that Psellos, *Chronographia*, VI.64, particularly ll. 7–12 (ed. and Fr. tr. Renauld 1926–28: 2.148–149; Engl. tr. Sewter 1953: 137–138), in his account of Empress Zoe (ca. 978–1050; emp. 1028–1050) and her palace, mentions workshops where perfumes and unguents were made. On this point, see Volk 1990: 336 and n19–20, 406 and n4.
72 Persia had developed skills in pharmacy and medicine and drawn on those of Greece. Translations of Greek medical works into Pahlavi, or Middle Persian, were a part of this development (see Russell 2004; Afkhami 2004; and Richter-Bernburg 2004b). Elgood 1953: 315–316 states, "In treatment the Persians made more advances than they did in diagnosis. Their pharmacopeia was based upon Greek herbals. . . . Botany and medicine marched hand in hand. To the Persians must be given the credit of going outside botany for their remedies and of adding to the pharmacopoeia a considerable number of chemical drugs. . . ." More recently, see, for example, Al^{c}am 2004; Anawati 2004; and Sajjādi 2004.
73 Looking briefly at the work of remedy-collection compilers of this period, the earliest recognisable name is that of Symeon Seth, an eleventh-century Byzantine physician whom Owsei Temkin described as "the great orientalist of Byzantine medicine" (Temkin 1962: 109). On him, see Kazhdan et al. 1991: 3.1882–1883 (A. Kazhdan). He wrote, among other works, *On the Properties of Foods* (ed. Langkavel 1848) using not only Greek sources but also Persian, Arabic and Indian. He was critical of Galen whilst commending Eastern medical practice. The *Dynameron* of Nicholas Myrepsos, among its many sources, records both remedy ingredients and remedies from Eastern medicine, amongst which are a number ascribed to Persian sources. On Melitiniotes, see Costomiris 1890: 170–171; and Ieraci Bio 1989: 232. Also more recently, Bennett 2013: 92–93.
74 See Touwaide 1997: 83.
75 Vogel 1967: 277.
76 Varella 1995: 29.
77 For ζουλάπιον (*zoulapion*), see ff. 441r, l. 27, 441v, l. 8, 442v, l. 33, 443r, ll. 2, 17 and 24, 450r, ll. 21 and 28. For χηράλειμα (*chêraleima*), see f. 447r, ll. 14 and 18, and κηράλειμα (*kêraleima*), f. 447r, l. 20.
78 *Parisinus graecus* f. 450r, ll. 27 and 30, respectively.
79 Costomiris 1890: 170–171.
80 See Omont 1888: 212. See ff. 403v, l. 8–404v in the manuscript.
81 See Sonderkamp 1987: 156–157.
82 Omont 1888: 212.
83 *Parisinus graecus* 2194, ff. 441r, ll. 8–26 and 448r, ll. 2–19, respectively.
84 The deficiency in the index, whose short titles can be equated well enough with the titles of each paragraph, comes towards the end at the entry for paragraph 69 (ξθ΄): this is numbered 70 (ο΄). This discrepancy continues as far as paragraph (ογ΄), indexed as

74 (οδ΄). Index and text are then realigned by paragraph, 74 being correctly numbered (i.e οδ΄) in the index thus repeating its use of that number. The last two paragraphs in the text, 75 (οε΄) and 76 (οξ΄), are not recorded in the index.

85 See f. 448r, ll. 20–27. Title: ἔμπλαστρον εἰς δυσεντερικοὺς καὶ λειεντερικοὺς καὶ δ [. . .] κούς.

86 Sonderkamp 1987: 157, reads this concluding line as the close of an index.

87 Cosmetics include applications for πανάδες (*panades*), perhaps freckles. This is perhaps open to doubt, although freckles may be a precursor to more serious skin conditions.

88 For these passages, see below chapter 8, with a synoptic presentation in Table 8.1.

89 But not in the sense of the naming of compounds such as κοκκία Γαληνοῦ (see *Therapeutikai*, chapter 51).

90 See *Vaticanus graecus* 299, f. 368r, l. 19. For a similar case, see also in the same codex, f. 368v, l. 7: στεφάνου ἀρχιατροῦ τῶν μαγγάνων.

91 Jeanselme 1930: 170.

92 See f. 450v, ll. 4–5: εἰς τό ἐκβάλαι, *eis to ekbalai*, *ridding*.

93 See *Parisinus graecus* 2194, f. 449v, ll. 14–17.

94 See f. 449v, ll. 17–19.

95 See ff. 449v, ll. 14 (ἔπασχε κεφαλήν) and 17 (πάσχων τὴν κεφαλήν).

96 See f. 449v, l. 14 (. . . κατὰ θώρακα καὶ κνήμην . . .).

97 See f. 449v, ll. 14 (θερμά) and 15 (ὑγροστόμαχος). See also § 39, περὶ ὑγροστομάχου, a simple list of ingredients for this condition.

98 See f. 449v, ll. 15 and 18 (ξανθὰ κοκκία).

99 For head ailments, see Crislip 2005: 80, 85 and *passim*.

100 See *Parisinus graecus* 2194, f. 450v, ll. 1–4.

101 See f. 450v, ll. 4–9.

102 See f. 450r, ll. 27–28 and 30–31, respectively.

103 See f. 450r, l. 27.

104 See du Cange 1688: 1591–1592, where the term is considered as a "Vox Afrorum". More recently, see Serikoff 2013: 108 no. 24 and 109 no. 29, where *tourpet* is equated with ἄλυπον, on which see *Dioscorides*, *De materia medica*, 4.178 (ed. Wellmann 1906–14: 2.327, l. 8–328, l. 2; Engl. tr. Beck 2005: 323–324).

105 Markopoulos 2006: 278: "Byzantium from the mid seventh century onwards was essentially a Greek-speaking cultural entity, as Latin . . . was pushed to the margin." Byzantium was a Greek-speaking world. As for *tourpet*, it was known in England as early as 1400 under the name *turbit*. See the Anglo-Irish receipt collection found in Manuscript London, British Library, Add. 15236 dating to around 1300, published by Hunt 1990: 238, no. 40, ll. 2–3, and 242, no. 54, l. 4.

106 See *Parisinus graecus* 2194, f. 447v, ll. 24–28, with the title l. 24: "κουκούμιον ὃ συνέθετο ὁ Βαγδαϊτής".

107 See f. 447v, ll. 19–24, with the title ll. 19–20: "εἰς τὴν δέσποιναν κυρὰν ξένην – μητρικόν".

108 For example, βάλσαμον (*balsamon*): *Dioscorides*, *De materia medica*, 1.19 (ed. Wellmann 1906–14: 1.24–26); βδέλλιον (*bdellion*): 1.67 (Wellmann 1906–14: 1.60–61); ζιγγίβερι (*ziggiberi*): 2.160 (Wellmann 1906–14: 1.226); κόμμι (*kommi*): 1.101 (Wellmann 1906–14: 1.93, ll. 6–7); μάκιρ (*makir*): 1.82 (Wellmann 1906–14: 1.79–80); σαρκοκόλλα (*sarkokolla*): 3.85 (Wellmann 1906–14: 2.102); σμύρνα (*smurna*), 1.64 (Wellmann 1906–14: 1.57–59); στάχυς (*stachus*), 3.106 (Wellmann 1906–14: 2.118).

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8 In the great porticoed street of Maurianos?

The *Mauraganos xenôn* text

> Hospitals are only an intermediate stage of civilization.
>
> Attributed to Florence Nightingale (1820–1910)

> A wise man ought to realize that health is his most valuable possession and learn how to treat his illnesses by his own judgement.
>
> *Corpus Hippocraticum*, *Regimen in health*, 9

In *Xenonika I* are seven remedies and one perfume whose source is said to be the *Mauraganos*.[1] Assuming that the *Mauraganos* is a *xenôn*, references to it in modern historiography are rare. The eight references here are the only record of an active existence.

The eight recipes are dispersed among the seventy-seven that make up *Xenonika I* in the *Parisinus graecus* 2194 (Table 8.1).[2] Two of them are attributed to a Michael ὀκτάριος (*oktarios*) or ἀκτουάριος (*aktouarios*) of the μαυράγανος (*Mauraganos*).[3] Three others are attributed to an ὀκτάριος (*oktarios*) of the μαυραγάνου (*Mauraganou*) whose name is not specified.[4] It is reasonable to assume that the three prescriptions of this unnamed *oktarios* refer to the *oktarios*/*aktouarios* Michael. No other reference to him is discoverable in available documentation, although an *aktouarios* of that name is known to have been in office in 1088.[5] If he were one and the same as this Michael, we may place the remedies in the late eleventh century.

If we can consider that the *Mauraganos* was a *xenôn* on the basis of the remedies above, we do not know where it was. Is it the *Maurianos xenôn* built by Emperor Romanos Lekapenos (emp. 919–945) in Constantinople?[6] The name *Mauraganos* is not attested in other sources. This may be attributable to the manuscript having been copied in the fifteenth century,[7] perhaps by a scribe who misread the *Maurianos*' name in his model. Antonio Garzya (1927–2012) observed of Byzantine remedies, indeed, that they are "part of a text most likely to have been altered by copyists".[8]

Table 8.1 The passages referring to the *Mauraganos* (*xenôn*) in the manuscript *Parisinus graecus* 2194

no.	*no. in text*	*Indication*	*Folios*	*Author according to the text*
1	41	Infant dysentery	445v, ll. 6–12	τοῦ μαυρογάνου
2	43	Pessary to aid conception	445v, ll. 15–19	τοῦ μαυρογάνου
3	54	Cream for skin eruptions	446v, ll. 16–20	τοῦ μαυραγάνου ὀκταρίου
4	55	Cream for skin eruptions	446v, ll. 20–21	τοῦ αὐτοῦ (i.e. τοῦ μαυραγάνου ὀκταρίου)
5	56	Pessary for cervical induration	446v, ll. 21–25	τοῦ μαυραγάνου ὀκταρίου
6	59	Plaster for cold states of the stomach and liver	446v, l. 29–447r, l. 4	Μιχαήλ ἀκτουαρίου τοῦ μαυραγάνου
7	69	Hand cream	447r, ll. 20–23	τοῦ μαυραγάνου
8	76	Fragrant ointment	447v, ll. 19–24	τοῦ ὀκταρίου Μιχαήλ τοῦ μαυραγάνου

Location of the Maurianos *xenôn*

Theophanes Continuatus refers to the Maurianos as a "*xenodocheion* located at the quarters of Maurianou".[9] Demetrios Constantelos notes that the Maurianos *xenôn* was founded as part of the philanthropic policy, directed to many institutions and charitable works, of Emperor Romanos Lekapenos.[10] He also observes that the quarters of Maurianos "were known also as the Maurice, because the Emperor Maurice [emp. 582–602], had once lived there".[11] George Majeska records a market in the Great Porticoed Street of Maurianos "where the major artery leading from the Mese . . . opened on to Perama and the Galata ferry dock, that is at the Basilike Gate".[12] The same premises in this quarter are also referred to as a *xenodocheion* in Marlia Mango's paper in which she records that Romanos established a *xenodocheion* "in the Portico of Domninos (also called *Embolos tou Maurianou*)".[13] These disconnected notes give only a hazy picture of the district. The *xenôn* there conjures up no image except through these remedies.

If hospital the Maurianos was, we have no indication of its number of beds, doctors or attendants at the bedside. The *Parisinus graecus* 2194 does, however, record among the few *Mauraganos*/*Maurianos* remedies that it had a senior physician and an *oktarios*/*aktouarios*, by name Michael. That post implies that the staff of this hospital were probably of much the same groups as we have seen in the texts discussed in earlier chapters.

The remedies

The few remedies ascribed to the *Mauraganos*/*Maurianos* are a curious mixture. Although dermatological preparations predominate (nos. 3, 4 and 7), the remedies for infant dysentery (1), cervical induration (5) and internal organs (6) have, inevitably, a greater import, despite the disfiguring and often intractable

problems of skin affections throughout the centuries. With this mixture of remedies, unrepresentative though they may be, it becomes reasonable to assume that the *Mauraganos*/*Maurianos* was, in current terms, a general hospital.

Infant dysentery

The first of the *Mauraganos*/*Maurianos* remedies is for children under five affected by dysentery. Among the symptoms specified were the not unfamiliar αἱματορῶν ἐκκρίσεων, καὶ δριμείας χολῆς, καὶ ξυσμάτων ἑλκωθέντων (*haimatorôn ekkriseôn, kai drimeias cholês, kai xusmatôn helkôthentôn*, "bloody secretions, bile and necrosing tissue").[14] Naturally at that time there was no distinction, however necessary now, between amoebic or bacillary dysentery. Almost certainly, either would have been a dangerous, even fatal, disease for children so young, exposed perhaps to insanitary conditions. The title to this remedy (κατάστιχον τοῦ μαυρογάνου ἐπὶ δυσεντερίας παιδίου πεντάετους, *katastichon tou mauroganou epi dusenterias paidiou pentaetous*) is honest enough to declare that the remedy was only inhibitory (κατάστιχον, *katastichon*); there is no mention of a curative property.[15] Indeed, the ingredients are common to numerous Byzantine remedies. The outlook was undoubtedly poor for a stricken infant.

Dysentery today is generally a self-limiting disease and with proper treatment may cease to affect sufferers within a relatively short time. In infants there may be a higher than average mortality rate, not least if the child becomes dehydrated. In this light, the remedy specified in this treatment text appears to be little match for the affection in so young a child.

The remedy is compounded as an *inhibitor* of the disease with the aid of a dozen ingredients mixed with water, including ῥόδα, φακὴ, ἀρνόγλωσσον, βαλανίδιον, κέγχρον, σάχαρ, γὴ πεπλυμένη, λημνία σφραγίς, ψιμύθιον σπάνικον (roses [petals/hips], lentils, plantain, acorns, millet, sugar, earth, Lemnian earth, white lead).[16] We should not despise medieval herbal remedies. Anne McCabe observes of them that "many . . . do have properties that are useful in maintaining health − they kill bacteria for example, or deaden pain".[17] Here, however, the likelihood is that they would have been ineffectual.

This is perhaps the first instance in which a *xenôn* text prescribes medication for infants. But the cure of dysentery that has possibly come from faecal contamination of food and water (most usually the source of dysentery in medieval times) would have been an unequal contest. Why, we are bound to ask, is there a note appended to the remedy, "a drug fallen out of use" (ἀπευθυσμένον, *apeuthusmenon*)?[18] If it is a drug fallen out of use, then its efficacy must be in doubt.

Conception, *mentagra* and *panacea*

The next Maurianos prescription recorded is paragraph 43 of the *Xenonika I*, a pessary "for conception".[19] It is made up of fifteen ingredients and mediated with old Chian wine:[20]

> μυρσίνης φύλλα, κυπαρισσόκοκα, ἐρίκης κάρπον, πίτυος, ἀκακίας, βαλαύστιον, ῥόδου ἄνθεα, κίκι, ξυλοβαλσάμυστι, κυπέρεως, κιναμώμου, καστορίζου, καρύου ἀρωματικοῦ, ξυλαλόης, μόσχου

No instructions are given for its preparation, an absence patent in other *xenôn* texts that implies that *xenôn* pharmacists would have no difficulty in preparing the suppository to a recipe so long as the ingredients were available. A text of this kind contrasts with the contemporaneous *Therapeutics* of Ioannes Archiatros in which the remedies describe, in their editor's words, "tools, ingredients and procedures in more detail than one would expect".[21]

Paragraphs 54 and 55 of the *Xenonika I*[22] are for an affection that appears to be similar to *mentagra*, an inflammation of the hair follicles of the beard. Both remedies are of the *oktarios*' devising. The first of these two remedies uses twelve ingredients including myrrh:[23]

> λάπαθον, λιβανωτόν, χαλκίτις ὠμή, μίσυ, σμύρνη, κομίδιον, ῥέον, λειχήν, ἀλκυόνιον, πύρεθρον, ἀμμωνιακόν, ὄξον δριμύ

The second is made of four ingredients amongst which are brimstone (a fumigator and purifier) and nitron or sodium carbonate,[24] a skin irritant if the nitron of the text equates to modern nitron's properties:

> θεῖον ἄπυρον, ἐλέβορος, δαφνέλαιον, νίτρον

Similarly, caution needs to be exercised about the meaning of *mentagra* in medieval times and its current meaning. In Rome it was a word sometimes used to describe a form of leprosy.[25] Dioscorides says of liverwort (*leichên*) that, among its uses, it treats lichen-like eruptions on the skin,[26] perhaps of a kind comparable to *mentagra*. Many other Greek physicians from Hippocrates to Theophanes Chrysobalantes touch on the subject.[27]

There follows (§ 56 in the *Xenonika I*) a recipe for preparation of a pessary for "inflation and long term indurations of the neck of the womb", again devised by the *aktouarios*.[28] It is difficult to express in current medical terminology the nature of the medical condition, whether it be trauma, infection, carcinoma or a simpler cause.

The preparation in paragraph 59 of *Xenonika I* is a "multi-purpose" remedy, almost a panacea that promises much, for internal organs.[29] Its title describes its purposes at length in a form of shorthand that a translation must expand:[30]

> σκευασία ἐμπλάστρου συντεθέντος παρὰ μιχαὴλ ἀκτουαρίου τοῦ μαυραγάνου πρὸς ψυχρὰς διαθέσεις γαστρὸς καὶ ἥπατος ψιλάς τε καὶ μετὰ ὕλης ἐπιρρύτου γινομένου · καὶ πρὸς μετρικὰς ὁμοίας διαθέσεις · καὶ ἁπλῶς πρὸς ἀτονιάς σπλάχνων, ἐπ᾽ ἐνδείας θερμασίας · ἐπί τε ἀναλήψεσιν νοσημάτων · ἐπί τε ἡλικίαις ψυχροτέραις · ἐπί τε χώραις βοριατέραις · καὶ ἁπλῶς ἐπὶ παντὶ σπλάχνων ἢ ἀπεπτοῦντι τελείως ἢ βραδυπεπτοῦντι · ἢ διὰ σύμφυτον δυσκρασίαν ἢ δι᾽ ἐπίκτητον · ἔστι δὲ τὸ φάρμακον εὐκάρδιον
>
> Preparation of a plaster devised by Michael, *aktouarios* of the *Mauraganou* for cold conditions of stomach and liver, when a meagre and flowing

> mucus-like discharge occurs; and likewise in conditions of the womb. Also specifically (efficacious) for lack of tone of the viscera, (and) for patent heat and for recovery from illnesses. (Efficacious, too,) for (the) colder times of life, and for (dwellers in) more northerly lands: also generally (valuable) for every internal organ and certainly for sufferer from indigestion, or from slow digestion, either because of the innate nature or the acquisition of a *dyscrasia*. It is, too, the medicine (that is) good for the stomach.[31]

δυσκαρασία (*duskrasia*) is strictly a bad temperament of the air, perhaps miasma or pollution. Alternatively, it simply means in this context feeling of being "out of sorts".[32]

Fragrance is a feature of two recipes for hand creams (§ 65 and 69 of the *Xenonika I*),[33] and two last "remedies" of the text (§ 76 and 77). Paragraph 76, Michael's ointment for the lady Xena,[34] arouses curiosity about its true purpose but is otherwise uninformative. Its twenty-two ingredients include twenty aromatic spices, woods, roots, flowers or leaves, some potentially costly, and make up an ointment *suitable for a mother* (μητρικόν, *mêtrikon*):[35]

> κουκούμιον συντεθὲν παρὰ τοῦ ὀκταρίου Μιχαὴλ τούτου Μαυραγάνου εἰς τὴν δέσποιναν κυρὰν Ξένην μητρικόν: ξυλαλόης στάγια δ΄, σχίνου ἄνθους, κιναμώμου, ἀμώμου. ξυλοβαλσάμου. κασίας, μυρσινοφύλλων, κυπαρίσσου, ῥόδου ἀνθῶν, στάχυος, τριψίδου, λαπάθου σπέρματος, ῥόδων αἰγυπτίων ἄνθους στάγια δ΄, κυπαρισικίων στάγια β΄, κιτρεόφυλλα, κιτρίου ἀρωματικοῦ, νιτροκόκκου, ἐκκαθαρισμίου κόστου, μάκιρ, κίννας ἀτρίπτου, ἐρείκης καρποῦ ἄνθους στάγια β΄, δενδρολιβάνου στύψεως ὁμοίως.

Is it a cosmetic or a medical lotion for an unspecified purpose? The recipe requires this salve to be dispensed in a jar (κουκούμιον, *koukoumion*).[36]

The final paragraph of the *Xenonika I* (77) is also for a fragrant ointment "which the Baghdad (perfumer) devised".[37] We know that essential oils contain antibacterial and anti-viral benefits and other therapeutic properties, but these qualities in medicine are often overlooked. In consequence, to most modern readers, these two last prescriptions seem out of place in a remedy text.

The vicissitudes of transmission

The vicissitudes of transmission have caused the loss not only of valuable historical texts but of minor excerpts of the kind that record the *Mauraganos*/*Maurianos* remedies. Too often the contents of surviving manuscripts have been unremarked or even ignored by scholars.[38] This last seems to have been the fate of the fifteenth-century codex *Parisinus graecus* 2194, long known to contain, *inter alia*, a remedy text δυναμερὸν ξενονικὸν διὰ πείρας (*dunameron xenonikon dia peiras*).[39] Only Aristotelis Kousis and Josef Sonderkamp have commented on the text to any extent.

Both *Xenonika I* and *Xenonika II* share a lack of discernible order of remedies, a feature of the *Therapeutikai*. The *Mauraganos*/*Maurianos* remedies stand not in a compact group in the text but are scattered through *Xenonika I*. Hence we find in *Xenonika I*, for example, affections of head and mouth dealt with in six remedies dispersed through the text.[40] A cluster of five epilepsy remedies,[41] and three that relate to gynaecology, are perhaps the most valuable categories for the user.[42] Not unlike the remedies of the *Therapeutikai*, *Xenonika I* is a curious mixture of non-specific and specific remedies: at least twelve give no indication of their use,[43] possibly because they were well known.

Even if the *Mauraganos*/*Maurianos* remedies are of minor importance, it is the remedy for the infant with dysentery that is critical to all that the preceding chapters have recorded. That a child, and perhaps many other children, may have been admitted with this or a similar serious affection speaks loud for the Byzantine concept of a *xenôn*. Does this remedy not quash the occasional observations of historians that *xenônes* were but the equivalent of first-aid stations or casualty centres? We may look across to the Ospedale Santa Maria Nuova, founded in Florence in 1288, or St. Bartholomew's Hospital in London whose origins go back to 1123. These hospitals still stand. The *xenôn* is gone, yet its purpose lives on and functions in modern guise.

Notes

1 The name is spelled μαυρογάνου (*mauroganou*) in three mentions: one in the table of contents of the *Xenonika I* (*Parisinus graecus* 2194, f. 441r, l. 26) and two in the titles of the paragraphs in the text (ff. 445v, ll. 6 and 15).
2 Paragraph 64 in the table of contents of *Xenonika I* (f. 441r, l. 23) corresponding to number 65 in the text (f. 447r, ll. 14–16), is entitled in both cases χειράλειμα (χη-, f. 447r, l. 14; *cheiraleima*) μαῦρον (*mauron*) – that is, *black hand cream*.
3 Nos. 6 (ἀκτουάριος, *aktouarios*) and 8 (ὀκτάριος, *oktarios*) in Table 8.1.
4 See in Table 8.1 the following numbers: 3 (ὀκταρίου, *oktariou*), 4 (τοῦ αὐτοῦ, *tou autou*, that is, τοῦ ὀκταρίου, *tou oktariou*) and 5 (ὀκταρίου, *oktariou*).
5 Cheynet 2003: 94.
6 See also Horden 2013: 150.
7 See Omont 1888: 212; and also Sonderkamp 1987: 156–157.
8 Garzya 1984: 245–257.
9 *Theophanes Continuatus*, *Chronographia*, VI.44 (ed. Bekker 1838: 430, l. 6). See Constantelos 1968: 197.
10 Constantelos 1968: 197–198.
11 Constantelos 1968: 198.
12 Majeska 1984: 354.
13 Mango 2000: 204. See *Theophanes Continuatus* cited, and also Janin 1969: 91 and 386–387.
14 See *Parisinus graecus* 2194, f. 445v, ll. 6–7.
15 See f. 445v, l. 6. The aorist participle κατάστιχον (*katastichon*) of κατέχω qualifies an implicit φάρμακον, presumably in the sense of a medicine that provides a countermeasure if an infant were presenting with admonitory symptoms.
16 See f. 445v, ll. 7–11.
17 McCabe 2009: 273.
18 See f. 445v, l. 7.
19 Number 2 in Table 8.1.
20 See f. 445v, ll. 16–18. For the Chian wine, see ll. 18–19: " . . . οἴνου χιοτικοῦ παλαίου".
21 Zipser 2009: 39.

22 Numbers 3 and 4 in Table 8.1.
23 See f. 446v, ll. 16–20.
24 See f. 446v, ll. 20–21.
25 In this sense, see Jones 1956: 264–265, note a, about *Plinius*, *Naturalis Historia*, 26.6, where Pliny condemns the use of the Greek term *lichenas* to design *mentagra*.
26 *Dioscorides*, *De materia medica*, 4.53 (ed. Wellmann 1906–14: 2.208–209, especially 209, l. 1; Engl. tr. Beck 2005: 269). Many other substances are mentioned in Dioscorides to treat this skin affection (1.68 = ed. Wellmann 1906–14: 1.62, l. 13; 1.105 = 1.98, l. 8 and 1.99, l. 6; 1.119 = 1. 111, l. 9; 1.121 = 1.112, l. 6; 1.123 = 1.113, l. 12 among others).
27 See, for example, *Corpus Hippocraticum*, *Aphorismi*, 3.20 (ed. and Fr. tr. Littré 1839–61: 4.494.18); *De liquidorum usu* 4 (ed. and Fr. tr. Littré 1839–61: 6.128.2); *De morbis I*, 3 (ed. and Fr. tr. Littré 1839–61: 6.144.13), 3 or *Prorrherticum* 2.43 (ed. and Fr. tr. Littré 1839–61: 9.74.8–17).
28 See Table 8.1, no. 5. For a similar preparation, see, especially, *Paulus Aegineta*, *Epitome medicinae*, 3.70 (ed. Heiberg 1921–24: 1.287, l. 14–288, l. 6; Engl. tr. Adams 1844–47: 1.632); and *Theophanes Chrysobalantes*, *Epitome de curatione morborum*, 205 (ed. Bernard 1794: 2.150–153).
29 Number 6 in Table 8.1.
30 See ff. 446v, l. 30–447r, l. 4.
31 See f. 446v, l. 35: εὐκάρδιον. The term can have the meaning of "good for the stomach" or "good for the heart". The first meaning seems most appropriate in the context.
32 The term does not appear in the *Corpus Hippocraticum* (see Kühn and Fleischer 1989). In Galen, instead, it is frequent (Durling 1993 does not list it; see Gippert 1997: 1.319–320).
33 For paragraph 65, see f. 447r, ll. 14–16 (χεράλειμα μαῦρον) and for paragraph 69 see number 7 in Table 8.1.
34 Number 8 in Table 8.1.
35 Apart from the intrinsic interest of this penultimate remedy, the wording is interesting. The expression εἰς τὴν δέσποιναν κυρὰν ξένην can be interpreted in different ways: a lady "from abroad" or a lady "named Xena". Ξένη translated as "from abroad" begins, indeed, with a capital letter, thus Ξένην, meaning Xena (as a personal name). The capitalised form of the initial letter might be either scribal error (in that case, the preparation is *for a foreign person*) or perhaps an indicator of rank (a foreign person with a high social status).
36 On this term, see Trapp 2001: 871, *sub verbo* κουκούμιν (*koukoumin*), and also (*Ibid.*) κουκουμάριον (*koukoumarion*), κουκουμίκιον (*koukoumikion*) and κούκουμον (*koukoumon*).
37 *Parisinus graecus* 2194, f. 447v, ll. 24–28.
38 Hunger 1978: 2.304.
39 See Kousis 1928: 3, 170.
40 See paragraphs 27 (f. 443r, ll. 27–30: head), 30 (f. 443r, l.32–443v, l. 1: head), 50 (f. 446v, ll. 2–7, ulcers in the mouth), 52 (f. 446v, ll. 11–14, teeth), 61 (f. 447r, ll. 5–8, head), 62 (f. 447r, ll. 8–9).
41 See paragraphs 19 (table: f. 441r, l. 12; text [numbered 18]: ff. 442v, l. 33–443r, l. 1), 20 (table: f. 441r, l. 12; text [numbered 19]: f. 443r, ll. 1–3), 21 (table: f. 441r, l. 12; text [numbered 20]: f. 443r, ll. 4–5), 21 (not present in table; text: f. 443r, ll. 5–7) and 25 (table: f. 13; text: f. 443r, ll. 14–16).
42 See paragraphs 43 (f. 445v, ll. 15–19, for conception), 44 (f. 445v, ll. 19–27, for conception) and 56 (f. 446v, ll. 22–26, for induration of the cervix).
43 See paragraphs 6 (f. 441v, ll. 3–8: ἀλειφὴ θερμή), 10 (f. 441v, ll. 25–28: σκευασία τοῦ λάχα), 14 (f. 442r, ll. 10–16: σκευασία θυμιάματος μοσχάτου), 15 (f. 442r, ll. 16–17: τὰ πεντάειδα κοκία), 28 (f. 443r, ll. 21–24: ἔλιγμα μελαντικόν), 29 (f. 443r, ll. 24–26), 36 (f. 445r, ll. 18–22: σκευασία ἡ λεγομένη τριαφαλαμάνια), 58 (f. 446v, ll. 28–30: σκευασία τοῦ δι᾽ ἀμπάρεως ἐμπλάστρου), 63 (f. 447r, ll. 10–11: ἐπιστυπτικόν), 70 (f. 447r, ll. 23–25: κόχλος σκευασμένος), 76 (f. 447v, ll. 19–24: κουκούμιον) and 77 (f. 447v, ll. 24–28: κουκούμιον).

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Part III

The search for healing in Byzantine *xenônes*

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9 Conclusions

> This hospital . . . where there have been healed of the pocques, fystules, filthie blaynes and sores to the nombre of. viij. hundred . . .
>
> Reported in 1552 of St. Bartholomew's Hospital, London

The *pocques* and *fystules* healed at St. Bartholomew's Hospital in London one hundred years after the fall of Constantinople almost certainly reflect a part of the staple workload of medieval hospitals. We may picture, too, the seventeenth-century Hôtel-Dieu in Paris receiving the poor and sick with these same afflictions. Further back in time, and to the East, the large "hospital" at Caesarea in Cappadocia, St. Basil's reputed foundation of the mid-fourth century, was said to be both poorhouse and resthouse, forerunner of the Byzantine *xenônes* of later centuries. But, is it possible to define the true nature of a hospital from antiquity to the late medieval centuries? Some of the difficulties lie in the protean nature of the meaning of "hospital". As we have recalled, Michael Dols said that the medieval Byzantine and Islamic hospital was "a civilian charitable institution", in the way of a "present day convalescent or nursing home".

Dols' comparison is all too plausible: the development of rudimentary hospitals is almost as assured as their subsequent evolution delineated in the Pantokrator *xenôn*'s *typikon*. The texts discussed in this study probably belong to this later period of medicalised hospitals in which the physician came to take a formalised and ordered place. Inevitably, *xenôn* medical texts are not a direct source of knowledge about *xenônes*, their physicians and their practices any more than a modern pharmacopoeia describes today's hospital. The *xenôn* remedy texts, however, reflect the unique place of the *xenôn* in the history of the hospital. On this argument, *xenôn*, physician and text form a more suitable structure for these conclusions than the more familiar triangle of patient, physician and disease.

A retrospective of the study

The Mangana passages, if genuinely attributable to that *xenôn*, offer some insight into the work and preoccupations of individual *xenôn* physicians, some of whose

names and offices are recorded in several prescriptions. Study of their remedies and phraseology suggests that in *xenôn* medicine, humoral diagnosis took second place to practice and experience (*peira*). The *xenôn* remedy texts confine surgical practice to phlebotomy alone; regimen is absent. No doubt the *xenôn* remedy texts reflected the affections encountered in *xenônes* along with the "pocques" and "filthie blaynes". It cannot be said with certainty, because the confident reconstruction of epidemiology or morbidity in Byzantine society is an unrealistic prospect.[1] Nonetheless, although no substitute for well-founded evidence, the *Xenonika* are potential – though selective – indicators of the affections which *xenôn* physicians treated.

The daily routine of the *xenônes* is similarly obscure. The means of, and any restrictions on, admission, the number of patients treated and discharged, and the skill of the physicians are subjects for conjecture; the extent of outpatient and domiciliary services is unknown. In the absence of historical fact or opinion, the occasional passages of relevance in chronicles and literature are susceptible to the familiar charge of "reducing history to a hunt for precocious signs of modernity". That has been the fate of the Pantokrator *xenôn typikon* whose reader does well to heed Ewald Kislinger's observation "that all the details contained in it reflect what was possible at the time".[2] They were not necessarily put into effect.

Yet, more tangible evidence is lacking. The floor plan of the Pantokrator *xenôn* can be sketched from a reading of its *typikon*, and letters John Tzetzes wrote to the administrator (*nosokomos*) of the *iatreion* in the twelfth century survive.[3] Beyond the often partial literary sources, there is nothing else to bring the Pantokrator or any other *xenôn* to life.[4] There is no manuscript illustration like that of the Florentine Ospedale Santa Maria Nuova of the sixteenth century which shows an orderly and functional ward.[5] The *Xenonika* remain the nearest contemporary record of the everyday work of the physicians and the *xenônes*, the transmuted triangle of *xenôn*, physician and text.

The *xenôn* as an institution[6]

The portrayal of the *xenôn* as important to the social fabric of Constantinople and influential in the practice of medicine – a centre of learning and teaching, perhaps equipped with library and scriptorium – was always likely to have been idealised. Its aptness to the twelve-bed Lips *xenôn* and its three physicians, for example, is barely plausible. Beyond Constantinople, too, *xenônes* came into being. Their place in the history of the hospital needs to show that they were more than institutionalised first-aid centres and refuges maintained under charitable auspices. The motives that prompted the establishment of *xenônes qua* hospitals may not necessarily be confined to piety and charity; there is an underlying presumption of need, especially in the case of the poor whose relief should be at the forefront of the actions of a Christian society. Yet, the *xenôn* cannot be studied in isolation from informal systems of care, family, kin and neighbourhood.[7] The elderly, lepers and orphans came to have their own places of care; the travellers still had their refuges; the institutional care of the sick met the needs of those without any other resource.

How far the *xenôn* was influential in the practice of medicine in its locality and whether it became a model for similar institutions outside Byzantium is disputed.

For example, Katharine Park and John Henderson claim that the Ospedale Santa Maria Nuova of sixteenth-century Florence is "the oldest direct ancestor of the hospitals we know today".[8] It evolved from a pauper's refuge founded in 1288 to become a hospital with statutes similar to, but more detailed than, the *typikon* of the Pantokrator *xenôn*. A notebook, compiled in 1515 by one of its physicians, appears to resemble the text of the *Therapeutikai*. Its remedies were tried and tested, very much, it seems, by experience, and reflected the most up-to-date medical practice.

There need, however, be no competition for the accolade of ancestry.[9] The Islamic hospital, though broadly secular in operation, shared much with the *xenôn*. The historian of Islamic medicine Lawrence Conrad suggests it appeared "to have been generally inspired by the precedent of poor and sick relief services offered at Christian monasteries and other church-run establishments".[10] There were hospitals in the Islamic world from the ninth century, and hospitals were founded later under the Ottomans. These and the Syro-Egyptian hospitals of the twelfth and thirteenth centuries were justly famed.[11] Katharine Park suggests that in the West the initial impetus for the foundations for the care of the acutely ill seemed "to have come from Islamic and Byzantine models, transmitted through the rule of the Knights of St. John".[12] This is an attractive proposition, but, in the words of Lindsay Granshaw:[13]

> Increasingly . . . historians of medicine do not assume that hospitals are the necessary, natural and obvious places in which to treat patients: they therefore question why the hospital became an important medical institution.

In part, a response will lie in example; some might add the influence of the Christian religion insofar as charitable works would be looked on favourably in the after-life. But this influence should not be exaggerated. Earlier chapters have observed that people seeking cures might call, as a first resort, on a variety of resources, religious and secular, outside medicine. *Xenônes* cared for no more than a small proportion of any given population. Yet, Timothy Miller asks whether the *xenônes* "shaped the whole perspective of medical science in the East Roman Empire". He continues, "Did they contribute to advances in Greek medieval medicine . . . ?"[14] He poses his questions in the wake of his conclusions about the creation of the *xenôn* texts and the part that *xenônes* may have had in the transmission of the texts of earlier writers.[15] Where does the reality lie? If response there must be, the *Xenonika* broadly defined the medical activity of a few *xenônes* within the inheritance of Greek medicine, and the attendant physicians defined the change from first aid in the refuge to the *xenôn qua* hospital.

The *xenôn* physicians

When Alexander Pope (1688–1744) asked, "Who shall decide, when Doctors disagree, And foundest Casuists doubt, like you and me?"[16] he was not speaking of physicians, although he could equally well have been doing so. In 1118, Anna Komnena, the daughter of Emperor Alexios I Komnenos, took the side of Kalliklês, a physician

called to the imperial sickbed. The other physicians present forbade purging, but Kalliklês explained in learned detail why purging was necessary. Neither he nor Anna prevailed, and the emperor died after the physicians' more conservative treatment.[17] It is likely that he would have died in any case, but this episode illustrates not only "professional" differences of opinion but also the physicians' helplessness in the face of mortal illness. If imperial physicians also disagreed on the course of initial treatment, would not *xenôn* physicians in daily practice be faced with similar outcomes?

Was the *xenôn* available to all in need and hope of healing? Many commentaries leave the reader with the impression that none were refused admission, and that may broadly have been so. But if the prospect of cure was patently impossible, then we might imagine a guiding hand towards spiritual resources might resolve the possibility of a bed being used to no purpose. We know so little about *xenôn* practices and may only presume that their charitable aims should allow ready access to all for whom there was room and whose condition warranted a bed. Yet from the twelfth century, some hospitals in medieval Western Europe would not admit "sufferers from fever, plague or contagious diseases".[18] There is no hint that this practice obtained in Byzantine *xenônes*; the *xenôn* remedy texts reflect the range of affections encountered, from the fevers of the *Prostagai* to buboes and plague in the *Therapeutikai* (chapter 50). Nor is it known how the *xenônes* avoided becoming once again refuges or institutions for the care of long-stay patients. There is no indication of the discharge rate or means of estimating it through the existence of any record comparable to the "books of the dead" of the Ospedale Santa Maria Nuova.[19] Implicit in these reflections is the wide range of skills required of a *xenôn* physician.

What then was the quality of the *xenônes* physicians of whom Timothy Miller says that they "came to dominate the medical profession. They [the *xenônes*] employed the leading physicians of the empire"?[20] At the deathbed of Emperor Alexius, the physicians present were undoubtedly imperial ones chosen for their skill; their disagreement about the course of treatment need not necessarily detract from any judgement of their skills. Nor need the skills of *xenôn* physicians have been any less than those of the imperial physicians; the grades of medical staff to be appointed at the Pantokrator *xenôn*, for instance, will have indicated degrees of experience.[21] Yet, their training and qualifications for employment, and how they advanced through the grades of their calling,[22] remain unknown. Miller's portrayal of these physicians sits uneasily with the generally critical portrait given, albeit fitfully and with whatever intent, in Byzantine literary genres. Alexander Kazhdan and Ann Wharton Epstein note this but propose, on the evidence of contemporary correspondence, that "the Byzantine attitude toward medicine changed between the tenth and twelfth centuries".[23] Physicians had become "acknowledged as equals within the intellectual sphere".

Even if this were so, it is not a constant reflection of Byzantine attitudes as a wider reading than the epistolary genre suggests, and it is not clear whether, among the generality of physicians who wrote or received letters that have been preserved, more than a few practised in *xenônes*.[24] The *Prosopography of the Palaeologan Period* lists many physicians of the Palaeologan age, but links none of them with

xenônes, presumably for lack of evidence.[25] The entries describe them as writers, owners, collectors and purchasers of manuscript texts, and even copyists.[26] Yet, there remains, whatever the source, the impression that physicians were of poor competence and avaricious, this impression being indelibly conveyed in the bitter exhortation of the eleventh-century writer Kekaumenos: "Pray do not fall into the hands of a physician, be he never so wise. . ."[27]

The test of the skills of a physician is often how many patients recover, whether by medicine, *vis medicatrix naturae*, or the mere fact of being attended by a specialist. Other means by which treatment might be sought existed in mediaeval Byzantium; nothing prevented herbalists, wise women and their like offering their services, nor people seeking their help, probably more in rural areas than in towns and cities. To seek the help of a physician privately was likely to be costly. A *xenôn* provided a free public medicine; either way, an act of faith by patient in physician subsists in any consultation. Religious faith, too, underpinned many *xenôn* foundations; witness the Pantokrator *xenôn* whose *typikon* requires the *xenôn*'s physicians, from the beginning of May to approximately 14 September, to do an evening ward round with "the wonted psalmody".[28]

If there is only a presumption of *xenôn* physicians' skills, their duties at the Pantokrator *xenôn* were clear. They were to attend the patients on the wards at set times and, after examination of each patient, treat them with "their medical skills".[29] Some sixty doctors of varying grades practised at this *xenôn*; amongst their number were four assistant physicians who were responsible for the treatment of outpatients.[30] This may seem a high number of physicians, but, according to the *typikon*, there was effectively a shift system in use. The Byzantine *xenônes* appear to have been alone among mediaeval hospitals in having a medical presence from an early stage, pre-figuring its later flowering in the evolution of hospital foundations in the West.[31]

The viewpoint of the disinterested onlooker is very different from that of the patient in search of healing or palliation, and the good physician needs, as well as skill, effective remedies to achieve the therapeutic success that, in Western eyes, would justify a *xenôn*'s existence. In the numerous remedies of the *xenôn* remedy texts, some of the active ingredients are known to be effective for some affections (and may even be used today in some form); some remedies may achieve their therapeutic aim by means that are scientifically explicable; yet most are incomprehensible by the standards of modern medicine and therapeutically inexplicable.[32] John Riddle gives evidence both for and against the value of the ingredients listed by Dioscorides, but the touchstone, he rightly observes, is whether the patient recovers.[33] Outcomes and efficacy of remedies, however, can be only an incidental part of this study for, as Armin Hohlweg observes in his evaluation of Ioannes Aktouarios,[34]

> . . . the historian of medicine, insofar as he is an historian, does not primarily have the task of evaluating the colour of urine against its specific gravity.

In the original triangle of physician, disease and patient, the last two elements were replaced by *xenôn* and text. Patient and disease, however, cannot

be entirely ignored. What might have been the expectations of patients admitted to the *xenôn*? Their approach to suffering and death seems to have combined a certain fatalism and submission to the will of God, and a knowledge of the "one physician", Jesus, "who empowered sufferers and enabled them to endure".[35] The physician's arts, whether intelligible or not to the patient, were a means to healing, but if they failed, the will of God would prevail. In the manuscript *Vaticanus graecus* 299 in which the Mangana passages occur, there are invocations of Christ more than once amongst more than a thousand remedies.[36] The *xenôn* was more than its curious description by the historians of medieval medicine Jole Agrimi and Chiara Crisciani as a "specifically therapeutic social space".[37]

The texts

Third in the triangle are the texts. The manuscript inheritance of the medical writers of Greece and late Antiquity provided a foundation on which, with the renewed interest in the sciences in tenth-century Byzantium, the production of therapy texts outside the canonical works was encouraged.[38] Though much in these texts was abstracted from the earlier medical tradition, it was often skilfully re-ordered in manuals and treatises to provide a ready source of reference for the user. The works of Theophanes Chrysobalantes provide excellent examples of this process and skill. The *xenôn* remedy texts are, on a far lesser scale, in this tradition, but with the difference that they are of application in the *xenônes* and not, though capable of it, of the general application of most medical treatises and manuals. That is not to say that their medicine is distinguishable from Herbert Hunger's "jungle of *iatrosophia*". Rather, it is to observe once again that they also serve as contemporary evidence for medical practice in the *xenônes*. All that is lacking is knowledge of the outcomes by which to judge the efficacy of *xenônes* and physicians. There is, however, little in the Byzantine corpus that approximates to the treatment records of, say, Rufus of Ephesus, extant only in Arabic translation, or the *Casebook* of Razi.[39]

Here a reminder is necessary that the *xenôn* remedy texts are "practical craft texts with no theoretical pretensions and requiring experience more than learning for their clinical application".[40] But hospitals are practical places whether employing a low level of craft medicine or the technological and bureaucratic medicine of the modern hospital. The *xenôn* remedy texts, however, need to be read with circumspection. Peregine Horden notes the difficulties of restoring from texts (or seeing "through" them) the biological reality – and of "converting indigenous morbidity categories into those of bio-medicine".[41] Theory (bequeathed by classical Antiquity) has "bled away and practical advice preponderates".[42] Even the assumption that practice derived from theory cannot be taken for granted.[43] The *xenôn* remedy texts as guides to *xenôn* practice are hedged by reservations. Nancy Siraisi observes that "medical texts are essentially prescriptive; consequently they are unreliable and inadequate sources of information about actual medical activity and its social content".[44] In a later chapter on disease and treatment, she modifies her earlier warning:[45]

> Recipe collections, *consilia*, and elementary manuals . . ., although still removed from actual practice, may be a better guide than more sophisticated medical literature to the kinds of medicines most frequently prescribed.

Even then, any portrayal of everyday medicine of those times is bedevilled by the several codicological problems recognisable in the study of all mediaeval medical manuscripts. Faith Wallis includes among them the general question of authenticity, of which the modern reader of these texts needs to be most aware.[46] There is the propensity of extracts to take on "a separate, but anonymous, textual existence". Wallis cautions the student about the de-authorising of medical texts, interpolation as a means of "improving a text", abbreviation and "additions of detail to instructions for preparing a medicament".[47]

Do these reservations give any confidence that the *Xenonika I* and *II*, copied at least two centuries after their compilation, resemble their archetypes, particularly the *Prostagai* text? Were the apparent allusions to earlier writers (for example, a description of the diseased liver resembling "the washings of newly killed flesh") familiar and common usage?[48] Or were they a mark of an earlier text that has become de-authorised and taken on a new existence? Searches of the corpus of preserved Greek medical literature have not disclosed any general evidence that the extant *xenôn* remedy texts were abstracted *in extenso* from earlier medical writers and edited without attribution.

Anna Maria Ieraci Bio says of *xenôn* texts, including the *Apotherapeutiké*, that they witness "une activité intense . . . qui n'était pas seulement de conservation et de transmission, mais aussi d'appropriation et d'utilisation des connaissances scientifiques précédentes".[49] The part that *xenônes* played in the preservation and transmission of the Byzantine inheritance of Greek medical texts is, in fact, hard to demonstrate, if by that is meant provision for copying of texts from *xenôn* resources. But preservation and transmission is only in part a matter of commissioning and acquiring copies of the canonic texts, and storing them. Transmission by teaching from them and utilising excerpts in, here, the *xenôn* remedy texts, is an equally valid process. It is also a means of preserving these excerpts and patterns of knowledge from other texts. But a distinction must be made between the canonic texts and their offspring, the texts for local and personal use including the *xenôn* remedy texts. Byzantine medical manuscripts of the ancient writers and those of late Antiquity sought by scholars of Arabic were of the first kind. Arabo-Islamic medicine was in turn to influence Byzantine medicine as their physicians, medical terminology and ingredients spread through Byzantine medicine; witness the names, glossaries and recipes in workaday manuscripts. Physicians from afar practised in Byzantium, Jewish and Frankish alike. That influence, as this study has attempted to demonstrate, is most readily detected in the "local" texts, including the *xenôn* remedy texts. Teaching of medicine in Byzantium was "on a scale and with a spirit of learning that surpassed the West before the 13th century."[50] In this milieu *xenônes* could not be entirely inactive in receiving and transmitting the tradition of ancient medicine.

A common purpose

This study has been founded on *xenôn* texts copied in some fifteen manuscripts. Many other manuscripts and sources have been consulted for evidence of written material originating from the *xenônes.* The library catalogue of the archôn Michael Kantakouzenos contains more than one reference to a *xenôn* text.[51] Whether or not there can be identified a sub-genre of *Xenonika*, some texts doubtless lost their *xenôn* ascription in transmission. Yet the total number of extant *xenôn* texts remains pitifully small compared with the numerous *adespota* remedy texts to be found in extant Byzantine manuscripts. Does their existence justify study in depth, when *prima facie* their contents differ in no obvious way from *adespota* texts in the Byzantine corpus?

A distinction in any case may not be universally applicable; for example, this study has observed the absence of incantations or religious invocations in the *xenôn* remedy texts. The inference is that *xenônes* held to a medicine unimpeded by external influences.[52] Yet the practice of a rationally based medicine does not differentiate between private consultation and institutional care in the written medium. The significance of the *xenôn* remedy texts is spelled out in their titles or headings. The *Prostagai* treatments, they record, are the kind that physicians use in the great *xenônes* (some of them being elsewhere attributed to the Mangana *xenôn*); the *xenôn* physician Romanos compiled a manual for junior physicians for use in their duties; the remedies of the *Therapeutikai* were assembled by more than one physician to accord with the practice of an unknown *xenôn*; other Mangana *xenôn* remedies were ascribed to some named physicians; half a dozen remedies of a Michael Aktouarios are dispersed in a *xenôn* text.

There emerges, nonetheless, from this brief recapitulation of titles and references a sense of common purpose in institutional medicine based on *peira*. The impetus for these texts was the *xenôn qua* institution and not the laboured compilation of some useful remedies for private use or circulation.[53] The text of the *xenôn* remedy texts was the written word that served institution and patient alike. There is in the *xenôn* remedy texts a presumption of the subordination of individual preferences of physicians for this or that remedy from the many thousands in the Greek and Byzantine corpus, to a group of remedies acceptable for common use. As the ninth edition of a twentieth-century pharmacopoeia observes, "There is no doubt that the *Pharmacopoeia* limits the freedom of prescribing and such a measure is hardly likely to prove universally popular."[54] Yet, in institutional practice, the merits of encouraging "the rational and economical use of drugs" are not to be dismissed.[55] That is not to say that remedy or treatment texts were immutable. In their transmitted versions, when in all probability they were no longer in *xenôn* use, the manuscripts show every sign of change. Utility – the essence of each text – however remains.

Is there any earlier precedent for this collegiate activity amongst physicians, practitioners whose individualism in practice throughout history has been a matter of remark? It is evident in the wider aspect of the various "schools" of medicine defined by Galen, for example, but these represented the adoption of common doctrines or traditions. The *collegium medicorum* of the earlier West, and the medical guild in Constantinople in the time of Constantine Porphyrogennetos, maintained the common

interests of the physician's calling.[56] Collaboration in the compilation of the *xenôn* remedy texts is, it may be surmised, far removed from these "schools" and associations, though operative within what has been described as Galen's "commonsensical middle path".[57] The *xenôn* remedy texts, viewed as operational as well as medical handbooks, have some right to be described as unique at this stage of medical history. They are naturally not unique as collections of remedies, as a broader comparison with other mediaeval recipe collections elsewhere in Europe would certainly show. It is their association with *xenônes*, whereby they demonstrate the only extant vestiges of that concern for the poor and sick, that sets them apart. They define the *xenôn* and its physicians, and their titles affirm the evidence for the *xenôn* as a medical institution akin in intent to the modern hospital practising a public medicine. The fabric of the *xenônes* has gone; the physicians are all but forgotten; humoral medicine has given way to modern Western medicine; only the texts are left. As well as the provision of minimum care for the sick by the monasteries, their safeguarding of medical writings were one of the means of handing down elements of earlier medical practice.[58] The fifteenth-century manuscript Athous Iviron 151 has inscribed on f. 18v the legend recording it as the property of the Iviron Monastery on Mount Athos, and dedicated by the inscriber Saba, monk-priest, to the hospital for the sick there.[59]

There is a remarkable persistence of the tradition of the Byzantine medical text, especially the prescriptions (*suntagai*) and medical writings (*iatrosophia*), the essence of which seems hardly changed from that of the *xenôn* and *adespota* texts. Apart from the texts discussed in this study, no other manuscripts appear to record the *xenôn* as a provenance of medical texts, except some five manuscripts with comparable titles, "*From Galen, Hippocrates, Meletius and (the) xenôn*".[60] Did the idea of the *xenôn* become lost, was it taken for a proper name (the codex *Vaticanus graecus* 2585 omits the preceding definite article), or was it simply supplanted by other terms, νοσοκομεῖον (*nosokomeion*), ξενοδόχειον (*xenodocheion*), or even οἰκία τοῦ ἀρρώστου (*oikia tou arostou*, "the house of the sick")?[61] A search of Giannis Karas' census of Greek scientific works and manuscripts of the Ottoman period reveals no mediaeval Greek medical manuscripts that ascribe the origin of text or remedy in these terms, although the occasional reference to use of the text in institutions may so describe them.[62]

In the long codex Athous Iviron 151 are two works that have become familiar in this study – the *Therapeutikai* and the *De curatione morborum* of Theophanes Chrysobalantes. They were preserved by monks who were also skilled in medicine and plant lore, as a sixteenth-century chronicle reports.[63] Other traditions continued, too. In the seventeenth century, the Turkish traveller Evlija Çelebi (1611–1682) records the training of Christian physicians at the monasteries of Athens − specifically at the monasteries of St. Philothea and at Pentele.[64] Simple remedies were preserved. In 1805 the French philhellene François Pouqueville (1770–1838) visited Greece and observed the health of the population first hand.[65] He found that the people still used certain simple methods which overcame the customary illnesses. For typhoid fever, they gave the sick cups of a powerful mixture of water, pomegranate and lemon. He saw intermittent fevers succumb to a mixture of coffee and lemon juice, ingredients unknown to the *xenôn* remedy texts of Byzantium but, from experience, successors to the simples and compounds of the *Therapeutikai*.

At the centre of these traditions is the copyist, renowned for all the lapses, errors, omissions, additions, conflation and alterations to which manuscript texts are prone. However strong the oral tradition, especially away from the centres of population, Greek and Byzantine medicine depended on the copyist for the preservation and transmission of the medical authorities as much as the unknown compilers and individual physicians. That the *xenôn* played a part in this collegiate activity is hardly to be disputed, and Timothy Miller, doyen of historians of Byzantine *xenônes*, is right to give it a special place in the history of medical practice. His assertion that the *xenôn* texts were a novel genre that influenced medical science merits further debate, but there is no doubt that they are sound, simple texts of their time with which the *xenônes* – each with their physicians Stephanos, Abram and Theodoros – answered the practical need for relief from pain and disease, whilst at the same time fulfilling the pious and charitable intentions of their founders. This is the legacy of the *xenôn* that deserves wider recognition in any history of the early hospital.

Notes

1 Compare Patlagean 1977: 105–112.
2 Kislinger 1987: 178: "alle enthaltenen Einzelfakten spiegeln eine damals mögliche Realität wider". It has its counterpart in the statutes of the Ospedale Nuova Hospital in Florence of the sixteenth century.
3 See for example his letter 74 (ed. Leone 1972: 108–109).
4 Unless, perhaps, the *Miracula S. Artemii* (ed. and Engl. tr. Crisafulli and Nesbitt 1997). See chapter 1.
5 Codex *Laurentianus Gaddi* 24, f. 247v. The illustrations of methods of bandaging and orthopaedic manipulation and traction in the Niketas manuscript *Florentinus Laurentianus* 74, 7 are formalised technical drawings of high quality, representative more of the copyist's skill than the *xenôn* at work. The Niketas manuscript may have belonged to the Forty Martyrs *xenôn* (on this manuscript and its possible presence in the collection of the Forty Martyr *xenôn*, see recently Bernabò 2010, *passim*).
6 On this, see Horden 2004.
7 Horden 1988: 371–372.
8 Park and Henderson 1991: 169. More precisely, the authors define it a little earlier in the paragraph as "arguably the first West European hospital in the modern sense of the word . . .".
9 See Nutton 1995b: 77–79.
10 Conrad 1995: 135.
11 See Savage-Smith 1997: 50–51.
12 Park 1992: 85.
13 Granshaw 1992: 198–199.
14 Miller 1985: 186.
15 *Ibid.*: 185–186. "[T]he Christian hospitals generated a novel genre of medical literature – the *xenôn* treatment lists. Second, the *xenôn* lists evolved out of the new tradition of professional writing. . . ."
16 *Pope*, *Of the Use of Riches*, vv. 1–2 (originally published as a pamphlet in 1733 [although the title page is dated 1732]; see Griffith 1922: 215–216, nos. 280–282; further published in Pope's complete works as early as 1735, as *Epistle III* among the *Ethic Epistles* [Pope 1735, 22–45, especially 22, vv. 1–2, for the citation here]). Although Pope did not speak of medical doctors, his question makes for a pertinent observation here.

17 *Anna Comnena*, *Alexias*, XV.11 (ed. Reifferscheid 1884: 2.305–317 = ed. Reinsch and Kambylis 2001: 1.493–505).
18 Nutton 1995c: 152–153.
19 See Park and Henderson 1991: 175 and 181 (rubric 21). As for the *xenônes*, a crude calculation based on estimated length of stay and turnover rate for a fifty-bed *xenôn* at best might see some two thousand patients in a year being discharged or dying at the *xenôn*.
20 Miller 1985: 10.
21 *Pantokrator typikon*, ll. 937–947 (ed. and Fr. tr. Gautier 1974: 84–85; Engl. tr. Jordan 2000: 757).
22 Commonly ὑπουργός (hupourgos), ἔμβαθμος (embathmos) and πριμμικήριος (*primikêros*).
23 Kazhdan and Epstein 1985: 155.
24 See, however, *Tzetzes*, *Epistulae*, 81 (ed. Leone 1972: 121), to the *nosokomos* of the Pantokrator *xenôn*, in which he names Galen as ὁ καὶ τῆς σῆς τέχνης καθηγητής (*Ibid.*, ll. 5–6).
25 Trapp 1976–1996.
26 The presumption is that these were medical works. Eleven physicians cited in Trapp's prosopography were sellers of manuscripts, twenty were owners, nine were copyists and three were collectors. Gamillscheg 1999: 477–486 observes that some of the copyists were not beyond integrating their own remedies into the texts they copied.
27 *Cecaumenus*, *Strategicon* 125 (eds. Wassiliewsky and Jemstedt 1896: 53, l. 7): " . . . εὔχου μὴ ἐμπεσεῖν σε εἰς χεῖρας ἰατροῦ . . .".
28 *Pantokrator typikon*, l. 959 (ed. Gautier 1974: 86–87; Engl. tr. Jordan 2000: 758): "μετὰ τὴν συνήθη ψαλμῳδίαν". This ordinance presumably allowed the longer daylight hours to be used to best advantage for ward rounds.
29 *Pantokrator typikon*, l. 961 (ed. and Fr. tr. Gautier 1974: 86–87; Engl. tr. Jordan 2000: 758): "ἰατρείαις προσφόροις".
30 *Pantokrator typikon*, l. 952 (ed. and Fr. tr. Gautier 1974: 86–87; Engl. tr. Jordan 2000: 757): "τῶν ἔξωθεν ἐρχομένων ἀρρώστων". Literally, "those sick persons coming from outside", a more probable translation than "coming from abroad" in current usage.
31 See Siraisi 1990: 38–39.
32 John Scarborough translates a remedy for quinsy included in *Scribonius Largus*, *Compositiones*, 70. He observes (Scarborough 2005: n25) in one instance that "the ingredients do have biologically active compounds . . . and comprise an effective analgesic".
33 Riddle 1985: xxi–xxii, and xxiii, for a hypothetical illustration of a means of gauging drug efficacy.
34 Hohlweg 1984: 133.
35 Christ is often referred to in Byzantine literature as *Christ the Physician* (*Christus medicus*). See for example Miller 1985: 58.
36 See for example f. 305v, ll. 23–25: "περὶ ἡμικρανίας ἐπίλογος χριστὸς ἀπέθανεν εἰς κρανίου τόπον· χριστὸς βοηθεῖ τοῦ κρανίου τὸν τόπον· χριστὸς ἐτάφη εἰς κρανίου τόπον."
37 Agrimi and Crisciani 1993: 235 (English translation 1998: 183).
38 Lemerle 1971: 296: "Il y a de bonnes raisons de croire que le X^{e} siècle a vu renaître le genre des traités médicaux, Ἰατρικά, qui avait fleuri quelques siècles plus tôt, étant bien entendu que les nouveaux ouvrages ne présentèrent, par rapport aux anciens, ni originalité ni progrès."
39 Some caution must be exercised about the attribution of all Rufus' treatment records to him, but see Ullmann 1978: 36 and n75. See also Álvarez-Millán 2000. The Hippocratic *Epidemics* (*De morbis popularibus*) and some books of the *De methodo medendi* of Galen provide examples of patient histories.
40 Horden 2000: 214.
41 *Ibid.*: 205–206.
42 *Ibid.*: 217.
43 Said of Islamic theoretical texts. See Álvarez-Millán 2000, *passim*.
44 Siraisi 1990: xi.

45 *Ibid.*: 148.
46 Wallis 1995, *passim*. For an example, see Fischer 2000: 240, for the alternative titles of an early Western compilation which transmitted both Greek and Latin texts.
47 Wallis 1995: 107–108, 116. If chapters in the *Therapeutikai* are compared with their counterparts in Ioannes' text, either the unknown Ioannes added instructions for making up remedies or the *Therapeutikai* erased them in their borrowing from him.
48 The expression appears in the *Prostagai*, chapter 4 (περὶ κοιλιακῶν): . . . ἡπατικὰ . . . ἐοικότα κρεῶν νεοσφαγῶν . . . It goes back to *Galenus*, *De symptomatum causis*, 3, 6 (ed. Kühn 1821–33: 7.246, l. 18) and can be traced in comparable form in *Alexander Trallianus*, *Therapeutica*, 9, 2 (ed. and Germ. tr. Puschmann 1878–79: 2.397, ll. 14–15; Fr. tr. Brunet 1933–37: 4.101) and *Paulus Aegineta*, *Epitome medicinae*, 3.46 (ed. Heiberg 1921–24: 1.250, l. 3; Engl. tr. Adams 1844–47: 1.560–564).
49 Ieraci Bio 1996: 193.
50 Temkin 1962: 111.
51 See the list of manuscripts contained in codex *Vindobonensis historicus graecus* 98 published by Foerster 1877; see for example 9 and 27, col. 2: κγ΄ – ἰατροσόφιον τοῦ ξενῶνος, ὅλον σωστό· καὶ τὸ χαρτὶ ἔνε βιββάκινο – ταῦτα εἰσι τὰ βίβλια τοῦ ἐνδοξοτάτου ἄρχοντος κύρου μιχαὴλ τοῦ καντακουζήνου. Doubts have been expressed about the reliability of the data in this list of manuscripts by the pioneering German Byzantinist Karl Krumbacher (1856–1909) in his *Geschichte der byzantinischen Literatur* (Krumbacher 1897: 508–510). This and the other lists of manuscripts in the same manuscript have been known for a long time (see Hartung 1578) and submitted to repeated critical analysis the most recent of which (Lauxtermann 2013) confirmed that some data are forgeries. It does not seem to be the case, however, of the list of manuscripts in which the present item and other similar appear.
52 The use of holy oils in remedies appears to be an exception. See chapter 38 in the *Therapeutikai*, for the holy oil of St. Zenaïs.
53 Vogt 2007: 315–317.
54 Quotations from *St. George's Hospital Pharmacopoeia*, 9th edition 1982: i, the earliest edition of which was dated 1768.
55 *Ibid.*: x.
56 See Nutton 1977: 207–212.
57 See Hankinson 1991: xxx.
58 Hohlweg 1995: 36.
59 See Lampros 1895–1900: 2.35: "Ἡ παροῦσα βίβλος πέλει μονῆς τῆς Ἰβήρων ἤγουν ἰατρὸνσόφει [*sic*]· ἀφιερόθη δὲ παρ' ἐμοῦ Σάβα ἱερομονάχου εἰς τὸ νοσοκομίον εἰς ἰατρεῖον τῶν ἐκεῖσε νοσούντων."
60 See the following five manuscripts, all of the eighteenth century save the Turin one, of the sixteenth. All are listed in Karas 1994 (except the Turin and Xanthi codices) and listed here in the alphabetical order of the name of cities where they are currently preserved: Athens, Parliament, 68 (Karas 1994: 114, 177–180, 281, 382); Turin, Biblioteca universitaria, B VII 22; Patmos 570 (Karas 1994: 114, 196–200, 383, 411); *Vaticanus graecus* 2585 (Karas 1994: 114, 269–271, 383, 386, 411); Xanthi, Mêtropolis, 5. The survival of the term *xenôn*, linked with the names of Galen, Meletios the Monk and Paul in these three works is owed either to mechanical copying or to a belief that it was the name of a physician, a guarantee of authority in the company of the other three.
61 See Kriaras 1968–2012: 11.27 and 12.46.
62 See Karas 1994: 59, 119, 215, 314.
63 Hohlweg 1995: 46.
64 Cited in Hohlweg 1995: 47.
65 Cited in Tselikas 1995: 57–58.

Part IV

Consulting hospital formularies

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10 Introduction

This part collects all the textual material about therapeutics coming from Byzantine hospitals that are currently known. The texts have been established in three different ways corresponding to three different types of available documentation:

(1) fragments attested by only one manuscript have been transcribed and reproduced without editorial intervention beyond explicating abbreviations and correcting evident mistakes (mainly orthographic). This is the case with the fragments referring to remedies coming from hospitals or associated with a physician in a hospital. These fragments can be found in the manuscripts *Vaticanus graecus* 299 and *Parisinus graecus* 2194. They can be read in the sections nos. 3 and 4 below.
(2) the manuals of pharmaco-therapeutics (remedy texts) attested – in whole or in part – by more than one manuscript have been transcribed from the most ancient manuscripts(s), which seem(s) closely to reproduce a possible original. Although the other manuscripts that have been located have been collated and variants readings have been identified, no *apparatus criticus* is provided as this transcription does not aim to be a scholarly edition – neither an *editio minor* nor a *maior* – since the inventory of manuscripts is not necessarily complete. This is the case of the προσταγαί (no. 1 below) and the θεραπευτικαὶ ἰατρεῖαι (no. 5). Not all their text has been integrally reproduced, however, but only the titles of the chapters with the *incipit* and *desinit* of the chapters, unless the chapters do not exceed a total of two to five lines; in this case, the full text of the chapter is provided.
(3) for the text reconstructed by assembling the Romanos and Theophilos treatises, an analytical synopsis reproducing the general structure of the resulting text, together with the detail of its major sections, is provided (no. 2 below). Such a synopsis is based on the manuscripts of Vienna, *medicus graecus* 48, and Florence, *Laurentianus* 75, 19. For each item in this synopsis, reference is given to the folios of the manuscripts where it appears, be it in the Vienna or in the Florence one, or in both. The synopsis also includes a segment of the Florentine manuscript that probably does not belong to the reconstructed text.

These are not editions in the canonical meaning of the word, but first-hand transcriptions of the textual material that has served as the basis of the present study and

is frequently referred to in the preceding pages. They aim to make this documentary corpus available for further study, all the more because they have not been available thus far, neither as a coherent corpus as is the case here, nor as single, complete texts, although some of them have already been studied by Edouard Jeanselme (1930), Aristotelis Kousis (1944a and 1944b), Timothy Miller (1985) and Ugo Criscuolo (1996).

The texts are preceded by a note on the manuscripts where these texts can be found. Again, this note has no pretention to be definitive – that is, it is not a catalogue of the manuscripts consulted for the reproduction of the texts under consideration. It is, instead, a brief presentation of the manuscripts, with the references of the catalogues where they are described and the identification of the texts under study here, together with any relevant characteristics. Manuscripts are grouped on the basis of the texts they witness, themselves ordered in the same sequence as their reproduction that follows. They are listed according to the alphabetical order of city names. Descriptions are based on available bibliography.

It might be the case – actually, it is highly probable – that other manuscripts containing the προσταγαί (no. 1 below) and the θεραπευτικαὶ ἰατρεῖαι (no. 5) will come to light in the future. Although they will not necessarily bring substantial modifications to the text of the two manuals, they will most probably complete our knowledge of the history of their texts. As such they will, it is to be hoped, validate the hypotheses formulated in this study and the text of the manuals itself, or add further elements to complete, refine or also modify the reconstructions presented here.

Be that as it may, the material collected here is intended to stimulate further studies not only on Byzantine hospitals, their manuals and their activities, but also on the impact of Byzantine hospitals on the health of the populations they were serving, on Byzantine society, its organization and structure, and the efficiency of the medical care provided by hospitals to the members of Byzantine society.

Principal manuscripts consulted

1. *Prostagai*

Vatican City, Biblioteca Apostolica Vaticana, *Vaticanus graecus* 292, ff. 200r–210v, fourteenth century (ff. 211r–234r, sixteenth century).

Catalogue: Mercati and Franchi de' Cavalieri 1923: 406–409.

Short description: the greater part of this codex, containing the προσταγαί text, is taken up with a collection of medical texts that is distinguished from the rest of the contents by the addition of continuously numbered chapters added in red on the page. This numbering lapses at f. 192v. At f. 210v, where this collection ends, there are bound into the codex twenty-two folios in a later fifteenth-century hand. At their conclusion the original hand resumes for another forty-seven folios. The Vatican cataloguers make no observation on whether these last folios form part of the collection in the earlier part of the codex.

Title: προσταγαὶ καὶ τύποι τῶν μεγάλων ξενόνων (*sic*), ὅσα ἐκ πείρας ἰατρῶν παῖδες θεραπείας χάριν προσάγουσι · καὶ τοῖς ἄλλοις πῶς πάσχουσιν ἐν τοῖς ξενῶσιν.

Incipit: ᾽Εὰν πυρέση ὁ ἄνθρωπος πρωΐ . . .

Desinit: . . . ἡ δὲ δια φυσαλίδων ποιεῖ, καὶ πρὸς ἕλκωσιν νεφρῶν.

Bibliography: Miller 1985: 164, 170, 177–179; Horden 2013: 149.

Vienna, Österreichische Nationalbibliothek, *medicus graecus* 37, f. 83r–v, fourteenth century.

Catalogue: Hunger 1969: 90.

Short description: this manuscript contains at f. 83r–v a fragment of the προσταγαί contained in the manuscript *Vaticanus graecus* 292.

Title: προσταγαὶ καὶ τύποι τῶν μεγάλων ξενώνων, ὅσα ἐκ πείρας ἰατρῶν παῖδες θεραπείας χάριν προσάγουσι · καὶ τοῖς ἄλλως πῶς πάσχουσιν μάλιστα ἐν τοῖς ξενῶσιν.

Incipit: περὶ συνεχῶν πυρετῶν. ᾽Εὰν πυρέσσῃ ὁ ἄνθρωπος πρωΐ . . .

Desinit: . . . ἀλθαίας φύλλα, ξύλα χαμαιμήλων θλᾶσπιν.

Bibliography: Miller 1985: 164, 170, 177–179.

2. Romanos

Milan, Biblioteca Ambrosiana, H 49 sup., ff. 7v–13v, fourteenth century.

Catalogue: Martini and Bassi 1906: 524–525.

Short description: this is a short codex of II + 77 folios of which the cataloguers say "natura operis, quod collectio excerptorum potius quam opusculorum esse videtur" etc. It is in poor condition. The part text of Romanos beginning with the proemion is one of three extant: it is not recorded by Diels 1906: 88.

Title: ῾Ρωμανοῦ κουβουκλεισίου Θεοῦ μεγάλης ᾽Εκκλησίας καὶ πρωτομηνυτοῦ τοῦ βασιλικοῦ ξενῶνος τοῦ Μυρελαίου ἤτοι Περιδόξου (compare with the titles of codices *Vaticanus graecus* 280 and *Vindobonensis medicus graecus* 48).

***Incipit*:** Οὐ παραιτητέον ἡγησάμην · ὅπως οἱ παρὰ τὰς ῥύμας καὶ τὰς παρεκβολὰς περιπατοῦντες . . .

***Bibliography*:** Kousis 1928; Kousis 1944b: 162; Criscuolo 1996.

Vatican City, Biblioteca Apostolica Vaticana, *Vaticanus graecus* 280, ff. 162v–169r, fourteenth century.

Catalogue: Mercati and Franchi de' Cavalieri 1923: 381.

Short description: this codex, of which Galen and Hippocrates' *Aphorismi* form the greater part, contains only a part of the Romanos' text copied in codex *Vindobonensis medicus graecus* 48. It is also found in codex *Ambrosianus* H 49 sup., f. 7r (Martini and Bassi 1906: 524).

Title: ῾Ρωμανοῦ καὶ κουβουκλησίου τῆς τοῦ Θεοῦ ἁγίας ᾽Εκκλησίας καὶ πρωτομηνυτοῦ τοῦ βασιλικοῦ ξενῶνος τοῦ Μυρελαίου καὶ τῆς Περιδόξου.

Incipit: Οὐ παραιτητέον ἡγησάμην, ὅπως οἱ περὶ τὰς ῥύμας καὶ τὰς παρεμβολὰς ἐπιπατοῦντες . . .

Desinit: . . . ὡς εἴ γε ταύτην ὑπερβαίνει τὸ νόσημα, ἐκπέπτωκε τῶν ὀξέων.

Bibliography: Kousis 1928; Kousis 1944b; Criscuolo 1996.

Vienna, Österreichische Nationalbibliothek, *medicus graecus* 48, ff. 1r–42v, thirteenth century.

Catalogue: Hunger 1969: 100–101.

Short description: the Romanos text does not end at f. 46r as generally supposed, but earlier, at f. 42v, l. 11. At line 12 the hand becomes rapid and uneven (seemingly, though, the same hand), and it is in that hand that the remainder of that page and the following f. 43r is copied.

At f. 43v there follows, in the same rapid hand to line 20, what appears to be an extract from a botanical lexicon. It comprises five entries, ὤκιμον, τιθύμαλλος, λαθυρίδες, κενταύρειον τὸ μικρόν and ἐπίθυμον κράτιστον in that order, and gives details of their uses. At line 20, the original hand resumes, but the subjects are in no order. At the purported conclusion of the Romanos text (f. 46r, l. 24), a lengthy extract from Galen begins, identified by Hunger as the second item in the codex.

The change in the evenness and pattern of the hand at f. 42v suggests that after the copying of the Romanos text, the short excerpts were added at a different time or, even perhaps, place. The erratic orthography, placing of accents and the irregularity of lines and margins is notable. The lines of text often rise and fall on the page, and twice the margins slope (external margin at ff. 9v and 36r). The number of lines to the page, excluding ff. 42v–46r, varies between 24 and 34, but most frequently 28 lines. There are two spellings of Romanos (Ῥωμανοῦ, f. 1r and Ῥομανοῦ, f. 30v); ὅσε is written for ὅσαι (f. 8r). Initial capital letters are often enlarged with some minor ornament added. Numerals are copied as such and not as words. It seems likely that the text was copied for personal use.

Title: Ῥωμανοῦ κουβουκλησίου τῆς τοῦ Θεοῦ ἁγίας καὶ μεγάλης Ἐκκλησίας πρωτομηνυτοῦ τοῦ βασιλικοῦ ξενῶνος τοῦ Μυρελαίου καὶ τῆς Περιδόξου. Compare with title of text in codex *Vaticanus graecus* 280.

Incipit: Οὐ παραιτητέον ἡγησάμην, ὅπως οἱ περὶ τὰς ῥύμας καὶ τὰς παρεμβολὰς ἐπιπατοῦντες . . .

Desinit: . . . κἂν συνάγῃ στύφοντα κἂν σκληρύνῃ μαλάγματα.

Bibliography: Diels 1906: 88; Kousis 1928; Kousis 1944b; Criscuolo 1996; Horden 2013: 150–151.

3. Mangana *xenôn* texts

Florence, Biblioteca Medicea Laurenziana, Antinori 101, fifteenth century, Manuel Atrapes.

Catalogue: Rostagno and Festa 1893: 213–218.

Short description: this manuscript contains, *inter alia*, particularly faithful copies of passages found in cod. Vat. gr. 299, including a number of the Mangana passages. It also includes excerpts from Galen, Hippocrates and Theophanes' *De curatione morborum*.

Vatican City, Biblioteca Apostolica Vaticana, *Vaticanus graecus* 299, fourteenth (*in.*) century.

Catalogue: Mercati and Franchi de' Cavalieri 1923: 425–430.

Short description: this codex of 519 folios bears the mark, in the opinion of the Vatican cataloguers, of four hands. The fourth is assigned to the greater part of the codex, the ἰατρικά, which extends from f. 219r to the concluding folio 519r. The ἰατρικά is made up of 1547 chapters and preceded by a table of contents headed πίναξ ἀρίστη τῆς παρούσης πυκτίδος.

The ἰατρικά carries several references to the Mangana *xenôn* and its doctors, referred to collectively in chapter 6 as the Mangana passages, interspersed throughout the text.

Title: various, including ἄλλο (εἰς ἔμφραξιν στομάχου) δοθὲν παρὰ θεοδώρου τῶν μαγγάνων, πρόσταξις στοματικὴ τοῦ ξενῶνος τῶν μαγγάνων, ἐπιστολὴ ἀπὸ θεσσαλονίκης παρὰ στεφάνου ἀρχιατροῦ τῶν μαγγάνων.

Bibliography: Miller 1985: 150, 183–5, 169, 205; Horden 2013: 149–150, 151.

4. *Xenonika*

Paris, Bibliothèque Nationale de France, *graecus* 2194, fifteenth century.

Catalogue: Omont 1888: 212.

Short description: this manuscript contains the *Xenonika I* at ff. 441r–447v and *Xenonika II* at ff. 448r–450v.

The codex contains 464 folios and is chiefly made up of Books V–XIV of Aetius. The remaining sixty folios contain some seven small treatises (see below), of which two include the reference to *xenônes* in their titles

Bibliography: Costomiris 1890:170; Kousis 1928: 78; Ieraci Bio 1989: 166, 226–227, 232, 238; Horden 2013: 150.

5. *Therapeutikai*

Athos, Iviron 151 (4271), ff .218r-223v, fifteenth century.

Catalogue: Lampros 1895–1900: 2.34–35.

Short description: the codex of 235 folios contains two Iatrosophia, each written in a different hand. The first *iatrosophion* comprises only eighteen folios, and at its conclusion (f. 18v) reads: ἡ παροῦσα βίβλος πέλει μονῆς τῆς τῶν Ἰβήρων ἤγουν ἰατρὸνσόφει [*sic*]. ἀφιερόθη δὲ παρ᾽ ἐμοῦ Σάβα ἱερομονάχου εἰς τὸ νοσοκομίον εἰς ἰατρεῖον τῶν ἐκεῖσε νοσοῦντων (unedited). The second and longer *iatrosophion* contains eighteen articles of

which the xenon text is the sixteenth. Chapter headings are in the margins adjacent to the text.

Title: Θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκολουθείαν τοῦ ξενῶνος.

Incipit: κισσὸν ξηράνας ἢ καὶ χλωρὸν κοπανίσας ἀπόβρεχαι εἰς ἔλαιον . . .

Desinit:. . . τὰ τοιαῦτα φάρμακα καὶ τὸ ἐφόλβιον ἀνάλογος καὶ τὸ καστόριον τέλος.

El Escorial, Biblioteca del Real Monasterio, E.IV.16: *antiquus***.**

Catalogue: Miller 1848: 354, no. 334; De Andrés 1968: 137, no. 312.

Short description: this codex is listed in the catalogue of the Greek manuscripts of the Escurial Library which predated the fire of 1671 at the Library (πίναξ τῶν ἐν τῇ βασιλικῇ βιβλιοθήκῃ βιβλίων). The early catalogue, however, lists the contents of the Codex which is described as Ἰατρικὰ ἐν δ᾽ ῳ.

Title: . . . κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος.

Florence, Biblioteca Medicea Laurenziana, plut. 7, 19, ff. 202r–209v, thirteenth/fourteenth century.

Catalogue: Bandini 1764–1770: 1.265.

Short description: the codex, which contains 268 folios, is copied in various hands. The "chapter" heads are rubricated and run in the text. Each page is of thirty lines, evenly spaced and written. The manuscript is a palimpsest.

Bandini provides a general heading to the forty-one articles of the codex of "Interrogationes et Responsiores de rebus sacris incerti auctoris", but in fact the codex falls into two parts. The first part is a collection of writings on sacred matters, from article 1 to 22, with the exception of article 10 which is Hippocrates, *Epistola ad Ptolemaeum.*

Thereafter, the remaining nineteen articles have a medical content. It is likely that this codex is composed of at least two manuscripts bound in one, especially given the observation by Bandini that it is "*varia manu exaratus*". Litavrin proposes a *terminus post quem* of the second half of the eleventh century for the archetype of the medical compilation.

***Title*:** Θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος (Bandini read ζενῶνος, although the manuscript reading is clearly ξενῶνος).

***Incipit*:** πρὸς ὀξὺν πονὸν κεφαλῆς · κισσὸν ξηράνας ἤ καὶ χλωρὸν κοπανίσας ἔμβρεχε εἰς ἔλαιον ὀθονίῳ δὲ συνθῆσας χρίε τὸ μέτωπον καὶ τοὺς κροτάφους ἄλλως . . .

***Desinit*:** . . . ὡς κῆρον τὸ πάχος ἔχειν ἐπιτιθεμένη.

Bibliography: Litavrin 1993; Horden 2013: 151.

Munich, Bayerische Staatsbibliothek, *graecus* 105, ff. 326v–333v, sixteenth century.

Catalogue: Hardt 1806–1812: 1.568.

Short description: Daremberg, 1853: 22–31, records the *xenôn Therapeutikai* text in the manuscripts Oxford, Bodleian Library, *Baroccianus* 150; Paris, Bibliothèque nationale de France, *graecus* 2236 (ff. 54r–59v); and Munich, Bayerische Staatsbibliothek, *Monacensis graecus* 105. Hardt describes the codex as: "Chartaceus, charta solida et laevi, titulis et initialibus miniatis, scriptura minuta et nitida, in folio, cum correctionibus marginalibus, foliorum 345, Saec. XVI, optime conservatus et inscriptus."

The eighteen preceding titles at ff. 1, 34, 43, 85, 96, 105, 113, 115, 116, 119, 179, 203, 213, 218, 223, 234, 248, and 256 in this codex are all of an astronomical or astrological nature. The text at f. 256 is catalogued as a treatise by Symeon Seth of Antioch on the sense of smell, but only the first chapter appears to be on this subject. The rest of the chapters are on cosmology.

Hardt catalogues f. 371 out of order and attributes it also to Symeon Seth. The title and the *incipit* that he quotes appear, on the slender evidence available in the catalogue, to be those of the prooemion to the *De remediis* of Theophanes Chrysobalantes which is to be found accompanying the text Θεραπευτικαὶ ἰατρεῖαι in a number of manuscripts. The final title in Hardt's catalogue of this codex is Περὶ διαίτης, but there is no indication of authorship. Its *incipit* "εὐχυμώτατον δὲ τὸ ἄριστον γάλα" is to be found in the manuscripts of Paris, *graecus* 2224, f. 128r and 2228, f. 243. A text with this *incipit* exists in Ideler 1841–42: 2.257.

Hardt concludes with the note "De his tribus ultimis frustra quaeris in veteri catalogo" (Concerning these last three [*treatises*], you seek in vain in the old catalogue). The altered order in which Hardt places the items is, therefore, as follows:

§19 f. 371 Πρὸς κωνσταντῖνου τὸν πορφυρογέννητον βασιλέα
§20 f. 326 Θεραπευτικαὶ ἰατρεῖαι
§21 f. 333 Ἁλάτιον συσκευασθὲν ὑπὸ τῆς τοῦ ἁγίου γρηγορίου
§22 f. 333 περὶ διαίτης κτλ.

Title: Θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκόλουθον τοῦ ξενῶνος.

Incipit: πρὸς ὀξὺν πόνον κεφαλῆς. κισσὸν ξηράνας ἢ καὶ χλορόν . . .

Desinit: . . . τριφθεῖσα μετὰ ὄξους.

Bibliography: Daremberg 1853: 22–31.

Oxford, Bodleian Library, *Baroccianus* 150, ff. 29r–32v, fifteenth century (init.).

Catalogue: Coxe 1853: 262–264.

Short description: Daremberg argues that the text is derived from the *Remedia* of Ioannes Archiatros to which reference is made in the manuscripts Florence,

Biblioteca Medicea Laurenziana, plut. 75.3, Munich, Bayerische Staatsbibliothek, *graecus* 288, Paris, Bibliothèque nationale de France, *graecus* 2224 and 2236.

Title: θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἀνδρῶν ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος.

Incipit: πρὸς ὀξὺν πόνον κεφαλῆς. κισσὸν ξηράνας καὶ χλωρὸν κοπανίσας ἀπόβρεχε εἰς ἔλαιον . . .

Desinit: (excluding the recipe for St. Gregory, *Salts*) . . . καὶ σταφὶς μετὰ ὄξου χρῶ ἔν βαλανείῳ.

Bibliography: Daremberg 1853: 22–31; Jeanselme 1930.

Paris, Bibliothèque nationale de France, *graecus* 2091, ff. 77r–86r, fifteenth century.

Catalogue: Omont 1888: 192–193.

Short description: The *Parisinus graecus* 2091 includes 156 chapters of the *Synopsis* of Theophanes Chrysobalantes followed by the *xenôn* remedy text *Therapeutikai*.

The text is written in a bold and rapid hand. There are no chapter numbers, but chapter headings are placed centre page, separated from text.

Title: θεραπευτικαὶ ἰατρεῖαι · συντεθεῖσαι παρὰ διαφόρων ἰατρῶν · κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος.

Incipit: πρὸς ὀξὺν πόνον κεφαλῆς. κισσὸν ξηράνας · ἢ καὶ χλωρὸν κοπανίσας, ἀπόβρεχε εἰs ἔλαιον . . .

Desinit: . . . χρῶ ἔν βαλανείῳ.

Bibliography: Jeanselme 1930; Miller 1985: 178 and 255.

Paris, Bibliothèque nationale de France, *graecus* 2236, ff. 54v–60r, fifteenth century.

Catalogue: Omont 1888: 219.

Short description: this codex contains both the part text of the *Remedia* of Iohannes Archiatros and the *xenôn Therapeutikai*, to the similarity of which Daremberg drew attention. In this codex the text of the *Therapeutikai* is preceded by a table with the following title:

Πίναξ τοῦ προκειμένου τμήματος ἐκ διαφόρων ἰατροσοφίων ἐκ τε παλαιῶν καὶ τῶν καθ' ἡμᾶς.

This copy contains fifty-two chapters of the *Therapeutikai* and has several glosses, particularly at the beginning. For example, in the first chapter, above κροτάφους, has been written μιλίγγους and μεσοκεφάλου above ἡμικράνου in the title of the second chapter. Elsewhere is the reading ὄξιδι above ὀξεῖ.

Incipit: κισσὸν ξηράνας, ἢ χλωρὸν κοπανίσας . . .

Desinit: . . . καὶ μίξας ὄξος, ἄλειφε.

Paris, Bibliothèque nationale de France, *supplementum graecum*, 764, ff. 84r–88v, fourteenth century.

Catalogue: Omont 1888: 86.

Short description: the *xenôn* remedy text forms part of an extensive medical encyclopaedia which begins at f. 37r e codex and ends at f. 116v; it is preceded by an index. The index is, in turn, followed by a dedication to Emperor Constantine, most likely to be Constantine Porphyrogennetos. The dedication matches others preserved in codices which are attributed to Theophanes (Nonnos) Chrysobalantes.

The first remedy is at chapter 344 of the medical encyclopaedia, and the last (preceding the recipe for St. Gregory, *Salts*) is 399 (τμδ΄ – τϘθ΄).

Title: θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν, κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος.

Incipit: πρὸς ὀξὺν πόνον κεφαλῆς. κισσὸν ξηράνας ἢ καὶ χλωρὸν κοπανίσας ἀπόβρεχε εἰς ἔλαιον . . .

Desinit: . . . καὶ ἀσταφὶς μετ᾽ ὄξους χριομένη ὁμοίως.

Bibliography: Costomiris 1891: 100–101; Kousis 1928; Jeanselme 1930; Miller 1985: 163–164 and 178–179; Ieraci Bio 1989: 178, 182, 220–221, 238.

Vienna, Österreischische Nationalbibliothek, *medicus graecus* 32, ff. 120v–127v, sixteenth century.

Catalogue: Hunger 1969: 85.

Short description: the text, alone of the manuscript texts of the *Therapeutikai*, concludes with three recipes for salts, one of which, the *Salts* of St. Gregory the Theologian, appears at the conclusion of the codex *Oxoniensis Baroccianus* 150, but is treated separately by Daremberg. The other two are the salts of Hippocrates and the salts of Manethos. These three recipes are on f.125vo.

Kousis appears to include ff. 127v–130v within the same work, albeit that he lists the chapter heads in a footnote. Hunger, however, attributes these folios to the Σύνοψις τῶν φυσικῶν of Symeon Seth, though lacking this title (ed. Delatte 1939: 17–89).

The first word of each recipe begins with a large ornate capital letter. There are notes in the margins in the same hand as the text, but often in a different ink.

Title: Θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος.

Incipit: κισσὸν ξηράνας ἢ χλωρὸν κοπανίσας . . .

Desinit: . . . ἢ ἀμπέλου δάκρυον μετ᾽οἴνου δός.

Bibliography: Kousis 1928.

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11 Texts

1. The *Prostagai*

The προσταγαί text can be read in six manuscripts containing the first chapter on fevers, and five manuscripts containing the remaining chapters. These manuscripts are the following (alphabetical order of city names [English translation]):

- Florence, Biblioteca Medicea Laurenziana, 75, 19 (the ἀποθεραπευτική text), 14th cent.;
- Vatican City, Biblioteca Apostolica Vaticana, *graecus* 292 (the ἀποθεραπευτική text), 14th cent.;
- Vatican City, Biblioteca Apostolica Vaticana, *graecus* 299 (1), 14th cent.;
- Vatican City, Biblioteca Apostolica Vaticana, *graecus* 299 (2), 14th cent.;
- Vienna, Österreichische Nationalbibliothek, *Vindobonensis medicus graecus* 37, 14th cent.;
- Vienna, Österreichische Nationalbibliothek, *Vindobonensis medicus graecus* 48 (the Romanos text), 13th cent.

The *stemma codicum* is not clear, although the *Vindobonensis medicus graecus* 48 and the *Florentinus Laurentianus* 75, 19 appear particularly close and form the unified text discussed in chapter 5. The *Vindobonensis* is the earliest manuscript containing some of the προσταγαί chapters, and there tends to be a presumption, even bearing in mind the dictum *recentiores non deteriores*, that it may be nearer the archetype in accuracy than the later manuscripts.

The *Vaticanus graecus* 292 contains the fullest προσταγαί text extant (see chapter 3). The texts (1) and (2) in the *Vaticanus graecus* 299 both derive from the *iatrika* of three hundred folios in the same manuscript (see chapter 4). The copyist of the *iatrika* was almost certainly working from two manuscripts containing the προσταγαί text. *Vaticanus* 299 (1), though omitting several chapters, follows the order of chapters in the *Vaticanus graecus* 292, to which it is close. *Vaticanus* 299 (2), in contrast, has many fewer chapters than the *Vaticanus graecus* 292, dispersed throughout the *iatrika* according to subject. The *Vindobonensis medicus graecus* 37 contains only one first chapter.

The synthetic list of the προσταγαί chapters that follows is based on the *Vindobonensis medicus graecus* 48 supported by the *Florentinus Laurentianus* 75, 19. It proceeds by chapters and includes for each of them the title, the references to all the manuscripts with the possible peculiarities in the title of the chapter, the *incipit* of the chapter and any relevant textual component, as well as possible significant variant readings and additions of single manuscripts.

προσταγαὶ καὶ τύποι τῶν μεγάλων ζενόνων, ὅσα ἐκ πείρας ἰατρῶν παῖδες θεραπείας χάριν προσάγουσι · καὶ τοῖς ἄλλοις πῶς πάσχουσιν ἐν τοῖς ξενῶσιν.

1. περὶ συνεχῶν πυρετῶν

Vindob. med. gr. 48	f. 26v	θεραπεία πυρετοῦ
Laur. 75, 19	f. 89v	θεραπεία εἰς πυρέττοντας
Vindob med. gr. 37	f. 83r-v	περὶ συνεχῶν πυρετῶν
Vat. gr. 292	f. 200v	no title
Vat. gr. 299 (1)	f. 248r	ἀπὸ τοῦ ξενῶνος προσταγαί
Vat. gr. 299 (2)	ff. various	ἐκ τοῦ ξενῶνος κτλ.

Inc.: ἐὰν πυρέσσῃ ὁ ἄρρωστος . . .

2. περὶ κεφαλαλγίας

Vindob. med. gr. 48	f. 29v	σημεῖον κεφαλαλγίας ἀετίου
Laur. 75, 19	f. 93r	ἀετίου περὶ κεφαλαλγίας
Vat. gr. 292	f. 203r	περὶ κεφαλικῶν
Vat. gr. 299 (1)	f. 250v	περὶ κεφαλαλγίων
Vat. gr. 299 (2)	f. 307r	πρόσταξις τοῦ ξενῶνος τῶν μαγγάνων. πρὸς κεφαλαλγικούς

Inc.: τὴν δὲ ὀδύνην τῆς κεφαλῆς . . .

3. περὶ ἀγρυπνίας

Vindob. med. gr. 48	–	–
Laur. 75, 19	–	–
Vat. gr. 292	f. 204r	περὶ ἀγρυπνίας
Vat. gr. 299 (1)	f. 250v	περὶ ἀγρύπνων
Vat. gr. 299 (2)	f. 255r	ἐπὶ ἀγρυπνοῦντας

Inc.: περὶ ἀγρυπνίας· εἰ δ’ ἀγρυπνεῖ, πρόσταξον . . .[1]

4. περὶ κοιλιακῶν

Vindob. med. gr. 48	f. 30r	(περὶ κοιλιακῶν) θεραπεία
Laur. 75, 19	f. 93r	γαλήνου περὶ κοιλιακῶν ἑρμηνεία, θεραπεία
Vat. gr. 292	f. 204r	περὶ κοιλιακῶν
Vat. gr. 299 (1)	f. 251r	περὶ κοιλιακῶν
Vat. gr. 299 (2)	f. 406v	πρόσταξις τοῦ ξενῶνος τῶν μαγγάνων περὶ κοιλιακῆς διαθέσεως

Inc.: τοὺς δὲ κοιλιακοὺς ἰᾶσθαι προσήκει . . .

Vat. gr. 299 (2): ὁ δὲ ἀνακλιθεὶς ἄρρωστος, εἰ μὲν ὑπάρχει κοιλιακός . . .

Vat. gr. 299 (1) *add.*: ποίει δὲ καὶ χυλọν · σπόδιον · μάκρα · αἰγύπτιον ῥόδον · μυτζόκοκκα · μύρτα · ἐξ ạγạθọκọκκạ γλυκυσίδια · ἤγουν ξυλοκέρατα ·

ψαλίδας · ἕλικας μπελίων · καὶ ῥόδα ἀποτριτωθέντα σὺν ὕδατι πίνειν · ἀντὶ δὲ μυτζοκόκκων, μύρτα περισσὰ ἐπίβαλε·

5. περὶ ἡπατικῶν

Vindob. med. gr. 48	f. 22r	–
*Laur.*75, 19	–	–
Vat. gr. 292	f. 206v	περὶ ἡπατικῶν
Vat. gr. 299 (1)	f. 252v	εἰς ἡπατικούς
Vat. gr. 299 (2)	f. 374r	περὶ ἡπατικῶν

Inc.: ἢ μὲν ὁ ἀνακλιθεὶς ἄρρωστος ἔχων ἦπαρ κακὸν . . .

6. περὶ σπληνικῶν

Vindob. med. gr. 48	f. 25r	θεραπεία
Laur. 75, 19	f. 88r	θεραπεία σπληνικῶν
Vat. gr. 292	f. 207r	περὶ σπληνικῶν
Vat. gr. 299 (1)	f. 253r	τὸ αὐτὸ καὶ σπληνικά
Vat. gr. 299 (2)	f. 377v	πρόσταξις περὶ σπληνὸς τοῦ ξενῶνος τῶν μαγγάνων

Inc.: τοὺς δὲ σπληνικούς, κατ᾽ ἀρχὰς μὲν φλεβοτομεῖν. ἢ ἐξακρίζειν . . .

Vatic. gr. 299 (2): ὁ δὲ ἀνακλιθεὶς ἄρρωστος σπληνικὸς εἴπερ ἐστί, δεῖ προστάττειν κατ᾽ ἀρχὰς μὲν φλεβοτομίαν . . .

7. περὶ στομαχικῶν

Vindob. med. gr. 48	f. 23r	θεραπεία
Laur. 75, 19	–	–
Vat. gr. 292	f. 207r	περὶ στομαχικῶν
Vat. gr. 299 (1)	–	–
Vat. gr. 299 (2)	f. 368r	πρόσταξις στομαχικὴ τοῦ ξενῶνος τῶν μαγγάνων

Inc.: εἰ δὲ ὁ ἀνακλιθεὶς ἄρρωστος στομαχικῶς πάσχει · . . .

8. περὶ ὑδερικῶν

Vindob. med. gr. 48	–	–
Laur. 75, 19	f. 125r	θεραπεία
Vat. gr. 292	f. 207v	περὶ ὑδερικῶν
Vat. gr. 299 (1)	f. 253v	περὶ ὑδέρου
Vat. gr. 299 (2)	f. 381v	ἀπὸ τοῦ ξενῶνος τῶν μαγγάνων

Inc.: ὅσοι γοῦν εἰς ὕδερον μεταπίπτουσι καὶ μάλιστα σπληνώδεις, τὴν ἰβηρίδα λεγομένην βοτάνην ἤγουν τὸ ἀγριοκάρδαμον ἐψήσας . . .

9. περὶ ῥιγίων

Vindob. med. gr. 48	–	–
Laur. 75, 19	–	–
Vat. gr. 292	f. 208r	περὶ ῥιγίων
Vat. gr. 299 (1)	f. 254r	πρὸς δὲ ῥιγία
Vat. gr. 299 (2)	–	–

Inc.: τοὺς μὲν αὐθημερινὸν ἔχοντας . . .

10. περὶ σκοτωματικῶν

Vindob. med. gr. 48	f. 33r	θεραπεία
Laur. 75, 19	f. 97r	τοῦ αὐτοῦ ἀπόζεμα
Vat. gr. 292	f. 208v	περὶ σκοτωματικῶν
Vat. gr. 299 (1)	f. 254r	περὶ σκοτωματικῶν
Vat. gr. 299 (2)	–	–

Inc.: πρόσταξον τὸ μικρὸν ἀπόζεμα . . .

11. περὶ ἰσχιδιακῶν

Vindob. med. gr. 48	f. 33v	θεραπεία
Laur. 75, 19	f. 97v	θεραπεία
Vat. gr. 292	f. 208v	περὶ ἰσχιακιακῶν
Vat. gr. 299 (1)	f. 254v	περὶ ἰσχίου
Vat. gr. 299 (2)	–	–

Inc.: πρόσταξον, ἀλοιφὴν ἀρθριτικήν . . .

12. περὶ βηχικῶν

Vindob. med. gr. 48	f. 37v	θεραπεία
Laur. 75, 19	f. 102r	θεραπεία
Vat. gr. 292	f. 209v	περὶ βηχικῶν
Vat. gr. 299 (1)	–	–
Vat. gr. 299 (2)	–	–

Inc.: πρόσταξον ἐν ταῖς ἀρχαῖς . . .

13. περὶ πλευριτικῶν

Vindob. med. gr. 48	f. 37r	θεραπεία
Laur. 75, 19	f. 101r	θεραπεία
Vat. gr. 292	f. 210r	περὶ πλευριτικῶν
Vat. gr. 299 (1)	f. 255r	no title
Vat. gr. 299 (2)	–	–

Inc.: πρόσταξον φλεβοτομίαν . . .

14. περὶ ἰκτερικῶν

Vindob. med. gr. 48	f. 41v	θεραπεία
Laur. 75, 19	f. 107r	θεραπεία
Vat. gr. 292	f. 210v	περὶ ἰκτερικῶν
Vat. gr. 299 (1)	–	–
Vat. gr. 299 (2)	–	–

Inc.: πρόσταξον φλεβοτομίαν καὶ κάθαρσιν . . .

15. περὶ ἀρθρίτιδος

Vindob. med. gr. 48	–	–
Laur. 75, 19	–	–
Vat. gr. 292	f. 210v	περὶ ἀρθρίτιδος
Vat. gr. 299 (1)	–	–
Vat. gr. 299 (2)	–	–

Inc.: πρόσταξον φλεβοτομίαν καὶ καθάρσιον . . .

16. περὶ νεφρῶν

Vindob. med. gr. 48	f. 34v	θεραπεία
Laur. 75, 19	f. 98v	θεραπεία
Vat. gr. 292	f. 210v	περὶ νεφρῶν
Vat. gr. 299 (1)	–	–
Vat. gr. 299 (2)	–	–

Inc.: πρόσταξον καὶ καθάρσιον . . .

2. The unified text of Romanos and Theophilos

The unified text of Romanos and Theophilos presented here is made of the principal headings or subdivisions from the Romanos text of the codex of Vienna, *medicus graecus* 48, followed by the passages that are common to that codex and the ἀποθεραπευτική of the manuscript *Florentinus Laurentianus* 75, 19, and finally the chapters from the ἀποθεραπευτική alone.

For the sake of completeness, the opening chapters of the ἀποθεραπευτική which are not part of the unified text and can be found in the Florentine manuscript have been included together with the references to the folios of the codex where they can be read. To be clearly distinguished from the rest of the reconstructed text, they have been aligned on the right margin in a layout that makes clear they do not pertain to the sequence of the text in which they are included.

Throughout, the structure is defined by each entry, showing how the affection or topic has been set out by the compiler. A number of subdivision headings have been inserted as appropriate to describe what follows; some mark those sections of the unified text that correspond to the arrangement of Paul of Aegina's *Epitome medicinae* as he describes it in his prooemion. The combination of subject matter in a few cases may appear arbitrary in medical terms, but the aim has been to show that here is a structure designed for easy access for a physician in *xenôn* medical practice.

Folio numbers are shown in the following registers:

Romanos text	ff. 1r–23v
Common text	ff. 24v–41v (Romanos) with ff. 87r–107v (ἀποθεραπευτική)
ἀποθεραπευτική	ff. 108v–149r

From the Romanos text in the manuscript Vienna,* medicus graecus *48
(cf. also codex* Vaticanus graecus *280, ff. 162v–169r)

Aetios

1r τί ἐστι πυρετός;
1v ὅτι χρὴ τὸν ἰατρὸν ἐπιστήμονα εἶναι
2r ὅτι ἄνευ τοῦ προγνῶναι τὴν νόσον
τίνα ἐστὶν τὰ ἀγαθὰ σημεῖα;
2v τίνα ἐστὶν φαῦλα σημεῖα;
3v ποίαν δὲ λέγειν πρώτην ἡμέραν τοῦ πάντος νοσήματος;
4r ὅτι ἡ ἀρχὴ τοῦ νοσήματος τριχῶς λέγεται
τί ἐστὶ πυρετὸς;
4v τί ἐστὶν ἄνεσις;
τίς ἀρχὴ πυρετικῆς ἐπισημασίας;
5r σημεῖα ἐπιδόσεως μερικοῦ παροξυσμοῦ
τί παρακμὴ τοῦ μερικοῦ παροξυσμοῦ σημεῖα;
τί ἐστὶν ἀρχὴ τοῦ ὅλου νοσήματος;
τίs ἡ ἐπίδοσις ἤτοι ἀνάβασις ὅλου τοῦ νοσήματος;
5v ἀκμῆς διάγνωσις ὅλου τοῦ νοσήματος
παρακμῆς διάγνωσις ὅλου τοῦ νοσήματος
ὅτι ἡ παρακμὴ ἐπὶ τοῦ παντὸs νοσήματος
ὅτι ὁ μέλλων σώζεσθαι ἄρρωστος
6r πότερον βράδιον ἢ τάχιον κρινεῖν τὸ νόσημα;
ὅπως δεῖ προγινώσκειν εἴτε κρίνεται τὸ νόσημα εἴτε μή
6v μελλούσης ἤδη γίνεσθαι κρίσεως σημεῖα
7r ὅπως δεῖ προγινώσκειν εἴτε ἀγαθὰ εἴτε φαῦλα γενήσεται ἡ κρίσις
8r ὅσαι ἀγαθαὶ κρίσιμαι ἡμέραι καὶ ὅσαι φαῦλαι

Romanos text in the codex* Vaticanus graecus *280 ends here.

Hippocrates

9r ἱπποκράτης ἀφορισμοί

Erotemata

9r τί ἐστὶν ἄνθρωπος;
τί ἐστὶν ἐγκέφαλος;
πόθεν ἐγκέφαλος;
πόσας κοιλίας ἔχει ὁ ἐγκέφαλος;
τί ἐστὶν ἡγεμονικόν;
9v εἰς πόσα διαιρεῖται τὸ ἡγεμονικόν;
τί ἐστὶν φανταστικόν;
τί ἐστὶν λογιστικόν;
τί ἐστὶν ἀναμνημονεστικόν;
ἐκ ποίας οὐσίας κατεσκευάσει ὁ ἐγκέφαλος καὶ ποίας κράσεως;
διατί κατεσκευάσαμεν ἡ φύσις τὸν ἐγκέφαλον ψυχρὸν καὶ ἀναίσθητον;

10r καὶ διατί πολὺν μυελὸν ἔσχε ἡ φύσις;
διατί μαλθακὸς ὢν ὁ ἐγκέφαλος;
διατί δεξια νεῦρα λαμβάνουσι;
διατί αὐτῷ μόνῳ πλεονάζει τὸ φλέγμα;
10v περὶ μνήμης ἀπωλείας
τί ἐστὶν νοῦς;

περὶ ἐπιληψίας

10v περὶ ἐπιληψίας
11v κομίδιν σαρακηνικόν
12r ὀσφράντα διεγερτικὰ ἐπιλειπτικοῖς
ἐπίλειψις κεφ [. . .] ὀσφραντα διεγερτικὰ ἐπιλειψικοῖς
θεραπεία μανίας τῆs ἐν κεφαλαίῳ ΛΒ΄

περὶ ἀποπληξίας

12v περὶ ἀποπληξίας
ἄλειμα πυρετῶν
ἄλλως περὶ ἀποπληξίας
13r ὅροι · ἀποπληξία
τί διαφέρει ἀποπληξία παραπληξίας;
θεραπεία

Erotemata

13v τί δὲ ἐστὶ λύπη;
τί ἐστὶ χαρά;
τί ἐστὶ θυμός;
τί ἐστὶ πταρμός;
κατὰ πόσας αἰτίας γίνεται ὁ πταρμός;

περὶ ψυχῆς

13v τοῦ ἁγίου μαξίμου περὶ ψυχῆς
14r τοῦ ἁγίου μαξίμου · τί ἐστὶ ψυχή;

Erotemata

14r τί ἐστι ποιότης;
πόσαι δυνάμεις εἰσὶν αἱ φυλάττουσαι τὰ σώματα ἡμῶν;
14v τί ἐστι φυσική;
τί ἐστι ψυχική; τί ἐστι ζωτική;
καὶ τί συμβάλονται ἀλλήλοις;
καὶ ἐν ποίοις μορίοις κεῖνται αὗται;
15r πόσα ψυχικὰ πάθη;
πόσαι ψυχικαὶ δυνάμεις;
πόσαι ψυχικαὶ ἐνεργείας;
φρόνησις ἐστι
τί ἐστιν σωφροσύνη;

τί ἐστιν ἀνδρεία;
τί ἐστι δικαιοσύνη;
πόθεν οἱ μὲν τῶν ἀνθρώπων γελῶσιν πάντοτε, οἱ δὲ στ [. . .] γνοῦσι;
15v πόσα εἴδη φρενίτιδος;

περὶ παραφροσύνης

15v περὶ παραφροσύνης
16r σημεῖα τῆς λεθαργικῆς
(ἄλλος) ληθαργική

περὶ κάρου

16v περὶ κάρου
καῦμα
ὕπνος
παραφροσύνη
ἀποπληξία
ἡμιπληγία
ἐπιληψία
17r περὶ κάρου

τί ἐστι κόμμα;

17r τί ἐστι κόμμα;
περὶ φλεγμόνης ἐγκεφάλου
17v περὶ κατόχου καὶ καταληψίας
περὶ ἀγρύπνου κόμματος
18r διὰ ποίαν αἰτίαν ἐπὶ τοῦ κατώχου;
διὰ τί μὴ σπῶνται οἱ κλείοντες;

Erotemata

18r πόσα ὀξέα νοσήματα;
πόσα κατόξεα [νοσήματα];
πόσα ὀργανικὰ φωνητικά;
πόσαι διαλεκτικά;

περὶ καρδίας

18v θέσις τῆς καρδίας
ἡ οὐσία
ἡ θέσις
19r ἡ χρεία
τὸ σχῆμα
πόσα μόρια ἔχει ἡ καρδία;
τί ἐστι καρδιακὴ διάθεσις;
σημεῖα καρδιακῶν

19v ποίῳ τρόπῳ συμπάσχει ἡ καρδία;
θεραπεία καρδιακῶν

περὶ ἥπατος

20r περὶ ἥπατος
[τί] ἦπαρ ἐστὶ;
20v [ἕτερον · τί] ἦπαρ ἐστι;
τίνες εἰσὶν ἡπατικοί;
ποῖον ἐστὶ ἐσκιρρωμμένον ἦπαρ;
ποῦ κεῖται τὸ ἦπαρ;
ποταμόν ἐστι τὸ χρῶμα
πόσα νεῦρα τοῦ ἥπατος;
πόθεν ἔγνωμεν ἥ τε τοῦ ἥπατος ἥ τε τῶν μυῶν;
πόθεν ἔγνωμεν [τοῦ ἥπατος] ἡ φλεγμονη;
21r διαγνωστικὴ γαληνοῦ

ἄλλο περὶ ἥπατος

21r ἄλλο περὶ ἥπατος
ἡ οὐσία
τὸ σχῆμα
21v ἡ ἐνέργεια
περὶ ξανθῆς χολῆς
θεραπεία

περὶ στομάχου

22r περὶ στομάχου
22v πόσας ἐνεργείας ἔχει ὁ στόμαχος;
πόσων σπλάγχνων ἐστὶν ὁ στόμαχος;
πόσων παλαιστῶν ἐστιν ἡ κοιλία;
πόθεν ὀνομάσθη στόμαχος;
23r σημεῖα στομαχικῶν
θεραπεία
πόσα ἢ ποῖα πάθη γίνονται εἰς τὸν στόμαχον;
ὀδύνη
φλεγμονὴ
σκίρρωσις
23v ἐμπνευμάτωσις
ἀνορεξία
παράλυσις
ἐμέτου ὄχλησις
ἐρύγη
ἀπόστημα · ἕλκωσις
θεραπεία

The opening chapters of the ἀποθεραπευτική which are not part of the unified text start here.

περὶ διαφορᾶς πυρετῶν καὶ διαγνώσεως αὐτῶν

82v περὶ διαφορᾶς πυρετῶν καὶ διαγνώσεως αὐτῶν
περὶ ἡπιάλου καὶ ἀνεκθερμάντου ῥιγός λύσις
83v περὶ συνεχῶν πυρετῶν
περὶ συνοχῶν πυρετῶν
84r περὶ καυσώδους πυρετοῦ
84v-85r περὶ ἐκτικῶν πυρετῶν
85v σημεῖα ἔτι περὶ καυσώδους πυρετοῦ ἀπορία λύσις
86r-v περὶ λοιμώδους πυρετοῦ

πυρετοί

87r τῶν οὖν πυρετῶν
οἱ μὲν εἰσὶ τῇ χειρὶ
δακνώδεις, ὡς ἐπὶ πυκνώσει
οἱ δὲ πελιδνοὶ, καὶ οἱ τεταρταῖοι
οἱ δὲ ἔξωχροι, καὶ οἱ τριταῖοι
οἱ δὲ ἐξέρυθροι, καὶ οἱ σύνοχοι
οἱ δὲ πρὸς τὴν χεῖρα νοτιῶδεις
ὡς ἀπὸ πλήθους χυμῶν γίνονταί
οἱ δὲ σφικώδεις ἰδεῖν δεινοὶ
καὶ ἡ λοιμώδεις καὶ ἡλιοκαιείς
οἱ δὲ διὰ παντὸς ἀβληχροί, ξηροί
ἀμυδροί καὶ οἱ ἑκτικοί
οἱ δὲ περικαείς ὡς οἱ καῦσοι
οἱ δὲ ὀξεις μέν ἠσσόμενοι δὲ τῆς χειρός
καὶ οἱ ἐφήμεροι
οἱ δὲ ἐπαναδιδόντες ὡs οἱ ἀφημερινοί
οἱ δὲ δακνώδεις μὲν
ἐπαναδιδόντες δὲ καὶ ἐπὶ βουβῶνα

The common text starts here

Vindobonensis		*Laurentianus*
μῦς		
24v	τί ἐστι μῦς	87r
εἰσοφάγος		
24v	περὶ εἰσοφάγου	87r

πλευριτικῆς

36v	περὶ πλευριτικῆς	100v
	πόθεν διαγνώσκεται;	
	πόθεν δὲ ἐστι;	
	ἀφορισμός	
	γαληνοῦ περὶ πλευριτικῶν	101r
	τί ἐστι πλευρίτις; ὅροι	
	πλευρίτις ἐστὶν ὀδύνη	
37r	σημεῖα	
	θεραπεία	
	ἐπίθεμα	

βήξ

37v	περὶ βηχικῶν	101v
	πόθεν βὴξ γίνεται;	102r
	τί ἐστι βὴξ;	
	θεραπεία	

πνευμονικοί

38r	περὶ πνευμονικῶν	102v
	τί ἐστι πνεύμων; ὅροι	
	σημεῖα περὶ πνευμονικῶν	
38v	θεραπεία	103r

αἵματος ἀναγωγάς

38v	περὶ αἵματος ἀναγωγάς	103r
	θεραπεία	
	περὶ ἐμπυήματος ἐκ τοῦ	
	δυναμεροῦ	104r
39v	θεραπεία	
40r	περὶ πτυσμάτων ἐκ τοῦ θεῶνος	105r

φθίσις

40r	περὶ φθίσεως	105r
	τί ἐστι φθίσις; ὅροι	
	τί διαφέρει φθίσις καὶ φθοή;	
	ἐκ τῶν δυναμερῶν · περὶ φθίσεως	
	καὶ ἐμπυήματος	105v
40v	ἀφορισμοί	
	θεραπεία	
41r	εἴλιγμα βηχικόν	106r

ἴκτερος

41r	περὶ ἰκτέρου	106v
	τί ἐστιν ἴκτερος;	
41v	κατὰ πόσας αἰτίας;	
	θεραπεία	

διαλείποντες πυρετοί

41v	περὶ τῶν διαλειπόντων πυρετῶν	107v

Congruence of texts ends
at* Vindobonensis medicus graecus *48, f. 42v, l. 11,
and* Florentinus Laurentianus *75, 19, f. 108v, l. 5.

The putative Romanos text continues, after the catalogue of Hunger 1969, with the following chapters from the *Epitome* of Theophanes Chrysobalantes (chapter numbers between brackets in the first section below [ff. 42v–43r] are to Martius' edition), and some miscellaneous texts all of which, it is argued in chapter 5, are not part of the unified text, but comparable to the opuscules elsewhere in codex of Vienna *medicus graecus* 48.

42v περὶ ἀφημερίνου (ρμα΄)
περὶ ἡμιτριταίου (ρμβ΄)
περὶ καταφοράς (ρμς΄)
περὶ κεφαλαλγίας (ι΄)
43r περὶ τῶν ἐξεκαύσεως κεφαλαλγούντων (ια΄)
περὶ κεφαλαίας καὶ ἡμικρανίας (ις΄)
περὶ ἀποφλεγματισμῶν, καθαιρόντων κεφαλήν (ιζ΄)
ἑῤῥίνα καθαρτικὰ κεφαλῆς (ιη΄)
ποτικὰ πρὸς ἡμικρανίαν (κ΄ [*partim*])
πρὸς τοὺς διὰ θερμὴν δυσκρασίαν ὀδυνομένους (κα΄)
43v ὦκιμον
τιθύμαλλος
ἐπίθυμον κράτιστον
43v εἰς δυσεντερίαν
εἰς ἐξοχάδας
44r εἰς πόνον κεφαλῆς (preceded by †)
44v πρὸς μέλαν ἴκτερον παύλου
στομαχικόν
45r περὶ τῆς γαστρὸς φλεγμονής

Unified text continues in codex* Florentinus Laurentianus *75, 19

περὶ περιόδου

108v περὶ περιόδου

περὶ δακνωδῶν πυρετῶν

108v περὶ δακνωδῶν πυρετῶν
109r οἱ δὲ ἐξέρυθροι
οἱ δὲ ἀλμυρώδεις
οἱ δὲ πομφολυγώδεις

περὶ παροξυσμοῦ

109v περὶ παροξυσμοῦ
109v παροξυσμὸς δέ ἐστιν
ποσαχῶς ὁ παροξυσμός; τριχῶς
110r ὅτι αἴτια τῶν παροξυσμῶν

περὶ ῥίγους

110r περὶ ῥίγους
110r τὸ ἐπὶ τῶν πυρετικῶν παθῶν ῥίγος

περίοδος

110v ἐκ τῶν ἀφορισμῶν
ἑρμηνεία · περίοδός ἐστιν

περὶ ἀφημερινοῦ πυρετοῦ

111r ἀφημερινοῦ πυρετοῦ
111r διαγνώσεως
111v πρὸς γλαύκωνα · ποταπὰ τὰ οὖρα ἀμφημερινοῦ τριταίου
καὶ τεταρταίου
θεραπεία

περὶ τριταίου

112r περὶ τριταίου
112r διάγνωσις τούτου
112v θεραπεία ἀλεξάνδρου

περὶ δύο τριταίων

113r περὶ δύο τριταίων
113r ἄλλο στέφανου|
γαληνοῦ σχόλιον
ἔτι περὶ τριταίου
113v διαιρεῖται δὲ ὁ τριταῖος, εἰς ἕξ
ἄλλως · θεραπεία τριταίου
114r περὶ διπλοῦ τριταίου, τοῦ περὶ κρίσεων

περὶ τεταρταίου

114v περὶ τεταρταίου
114v ἄλλως
ἐκ τῶν ἀφορισμῶν
σχόλιον περὶ διαφορᾶς πυρετῶν
115r ἀπορία
λύσις
γαληνοῦ
παύλου
115v κοκκία τεταρταϊκά
ἄλλο ἀλεξάνδρου · ὁ τεταρταῖος πυρετός

περὶ ἡμιτριταίου

116v περὶ ἡμιτριταίου
117r ἄλλως

Erotemata

117v σχόλιον περὶ διαφορᾶς πυρετῶν
118r ποῖά εἰσιν ὁμοιομερῆ νοσήματα;
118v εἰs πόσα διαιροῦνται τὰ νοσήματα;
119r ποῖα εἰσὶ διακριτικά;
καὶ ποῖα παροδευτικά;
καὶ ποῖα ἀποκριτικὰ μόρια τῆς κόπρου;
ποῖα ὑπερκείμενα;
καὶ ποῖα ὑποκείμενα ἔντερα;
ὡσαύτως ποῖα εἰσὶν τὰ διακριτικὰ;
καὶ ποῖα παροδευτικὰ;
καὶ ποῖα ὑποδευτικά;
καὶ ποῖα ἀποκριτικά, τῶν οὐρητικῶν ὀργάνων;
119v σῆμα
πῶς τὸ αἷμα μεταβάλλεται;
σῆμα
πῶς τὸ πύον γίνεται λευκόν;
ποῖα κοινὰ πάθη τῶν ἐντέρων;
καὶ ποῖα ἴδια;

περὶ ἐφημέρων πυρετῶν καὶ πολυημέρων

120r πόσαι αἱ διάφοραι τῶν ἐφημέρων πυρετῶν;
πόσαι διαφοραὶ ἑκτικῶν πυρετῶν;

περὶ ἑκτικῶν

120v περὶ ἑκτικῶν

121r ἔτι περὶ ἐκτικῶν
περὶ τοῦ γυναίου (οὕτως οὖν ἔναγχος γυναίῳ ἐκτικῷ)

περὶ μαρασμοῦ

121v περὶ μαρασμοῦ
καὶ τί ἐστι μαρασμός;
καὶ διὰ πόσας αἰτίας γίνεται;
καὶ ποίῳ λόγῳ ταῦτα τὰ αἴτια;

περὶ συνεχοῦς πυρετοῦ, καὶ συνόχου

122r περὶ συνεχοῦς πυρετοῦ, καὶ συνόχου
122v ἀϵτίου, περὶ συνεχοῦς
ἐκ τῶν ἀφορισμῶν
γαληνοῦ περὶ συνόχου
123r ὁρῶμεν ὅτι ἐν ταῖς εἰσβολαῖς τοῦ πυρετοῦ
τίς ἡ αἰτία;
λύσις
διατί ἐπὶ τῶν συνόχων γίνεται ταχέως κρίσις; λύσις
123v πῶς ἐπιμελητέον γλώσσης τραχύτητα;
124r καταπότια ἄδιψα διοσκορίδους

τὰ ἐκτὸς τοῦ σώματος πάθη

περὶ ὑδερικῶν

124v περὶ ὑδερικῶν
εἰσὶ δὲ τρία εἴδη ὑδέρων
125r ἐκ τῶν ἀφορισμῶν
θεραπεία
κατάπλασμα ὑδερικόν
ἀλοιφή
περὶ αἰδοίων
126r πρὸς ὑδερικὰ καὶ ῥευματικοὺς διαθέσεις καὶ πρίσμα ποδῶν
126v κοκκία ὑδερικά

ὅροι περὶ δυσουρίας

126v καὶ ὅπως ἐν τοῖς νεφροῖς οἱ λίθοι γίνονται
ἄλλος
τῶν περὶ τὴν κύστιν γινομένων παθῶν σὺν πυρετῷ
δυσουρία ἐστὶν
σημεῖα δυσουρίας
ἐπέχεται τοίνυν τὸ οὖρον, κατὰ τρόποις ὀκτώ
127r ὅτι τρεῖς προσηγορίαι τοῦ ἐποχετοῦ οὔρου

τί ἐστι λιθίασις;
θεραπεία
127v θεραπεία, πρὸς λιθιῶντες (χειρουργία χρησάμενοι κομίσομεν)

περὶ τετάνου καὶ σπασμοῦ

127v γαληνοῦ
ἐκ τῶν ἀφορισμῶν
θεραπεία
128v πυρία

περὶ κυνάγχης καὶ παρακυνάγχης συνάγχης καὶ παρασυνάγχης

128v ἐκ τῶν ἀφορισμῶν
ὅρος · τί ἐστι συνάγχη
129r θεραπεία

περὶ ἀρθρητικῶν

129v τί ἐστιν ἀρθρῆτις;
τί ἐστι ποδάγρα ;
ἐκ τῶν ἀφορισμῶν
τί ἐστι παράλυσις;
ἔτι περὶ ποδάγρας
130r θεραπεία πρὸs φλεγμονάς
130v κατάπλασμα ποδαγρικόν

εἰs ἀποκοπὴν φωνῆς

130v ἑτέρα θεραπεία

περὶ ἑλμίνθων

131r γίνονται ἕλμινθες, καὶ ἐν πυρετοῖς, καὶ δίχα πυρετῶν
131v ὅτι τρία τὰ τούτου γένη
θεραπεία
εἰ μὲν ἀπύρετος εἴη, ἐπίθεμα
εἰ δ ἐν πυρετοῖς εἶεν

περὶ γυναικῶν ἐμμηνων

132r λύσις θεραπεία
παύλου τὰ διουρητικὰ πάντα

περὶ ἀρτηριακῶν

132v θεραπεία (ἀπυρέτου μὲν ὄντος . . . πυρετοῦ δὲ ὄντος)
κοκκία δυσπνοικά

περὶ ἀσθματικῶν

133r τί ἐστιν ἆσθμα;
θεραπεία

περὶ λυεντερίας

133v ἐκ τοῦ δυναμεροῦ
θεραπεία

ἡροδότου περὶ τρόμων ἐν πυρετοῖς

134r ἡροδότου περὶ τρόμων ἐν πυρετοῖς
134v παύλου
τρομικῶν σημεῖα

περὶ καταφορᾶς

135r περὶ καταφορᾶς

περὶ συντήξεως

135v περὶ συντήξεως
136r ἐπὶ τούτου πονηράτου πυρετοῦ
θεραπεία
σημεῖα χολερικοῦ πάθους · καὶ τί ἐστιν;
χολέρα ἐστὶ
ὅροι
136v ἄλλως · χολέρα ἐστὶ
θεραπεία

σημεῖα τῶν μελαγχολικῶν

136v σημεῖα τῶν μελαγχολικῶν
καὶ τί ἐστι;
137r τισὶ δὲ καὶ πυρετοὶ ἐπακολουθοῦσιν;
θεραπεία

περὶ ἐνθουσιασμοῦ

137r περὶ ἐνθουσιασμοῦ
καὶ τί ἐστιν;
θεραπεία
περὶ ἐφιάλτου

περὶ λυγμοῦ

137v περὶ λυγμοῦ

περὶ ἕρπητος

138r περὶ ἕρπητος θεραπεία

περὶ ἀποστήματος

138r περὶ ἀποστήματος
138v σηπτικόν

περὶ ὑδροφόβων

138v περὶ ὑδροφόβων
θεραπεία
139r ἄλλο

περὶ κλυσμῶν

139r περὶ κλυσμῶν
139v ἐν συνεχέσι πυρετοῖς

περὶ διαχωρημάτων

140r περὶ διαχωρημάτων

Miscellanea (cf. Paul of Aegina,* Epitome medicinae*, Book I)

140v ὕδωρ · βορά
ἀγρυπνίη βορῶν
141r περὶ ἄρτου
141v παύλου περὶ οἴνου δυνάμεως
142r ἀφορισμῶν
περὶ τροφῆς, ἐν ποίοις αὕτη μορίοις χυλοποιεῖται
καὶ ποῦ ἡ πέψις γίνεται
ἔτι περὶ πέψις
142v περὶ σιτίων
περὶ ἀπεψίας
ἔτι περὶ ἀπεψίας
περὶ πέψεως
ποσαχῶς ἡ ῥεύματα ἢ διάθεσις
πόθεν ἡ ὄρεξις γίνεται
143r περὶ οἴνου
περὶ ὕδατος

περὶ λουτρῶν καὶ καθάρσεως

143r περὶ λουτρῶν καὶ καθάρσεως

πόθεν τὰ πληθωρικὰ νοσήματα γίνονται

143r πόθεν τὰ πληθωρικὰ νοσήματα γίνονται
ὑπὸ πλεονεξίας τῶν τεσσάρων χυμῶν

περὶ ὄγκων

143r περὶ ὄγκων
ὅτι ὄγκοι δ΄

Varia

143v περὶ ἀψινθίου
περὶ καπάρεως
περὶ πτυσάνης
ἡ πτυσάνη, χρησιμωτάτη ἐστίν ἐπὶ
τῶν τοιούτων δυναμέων · τοῦ πυρετοῦ
ψύχει · καὶ ὑγραίνει
περὶ ὀξυμέλιτος
ὁ ὑγρὸs διοσπολίτης
144r τί διαφέρει ἴαμα βοηθήματος;
διατί ἐν τῃ νυκτὶ ἡ δυσφορία γίνεται;
περὶ σημείων νοσημάτων
περὶ πόνων
πόνον εἶπε, τὸ γυμνάσιον
καὶ τὴν ὀδύνην · πόνον καὶ τὴν βλάβην
ἐκ τῶν ἀφορισμῶν
τί ἐστι κρίσις;
τί ἐστι πάθος;
τί ἐστι νόσος;
τί ἐστιν ὕπνος;
144v τίς ἡ ποιητικὴ αἰτία τοῦ ὕπνου;

περὶ φλεβοτομίας

144v περὶ φλεβοτομίας
περὶ φλεβοτομίας ἐπὶ συνόχου
περὶ δυνάμεως φλεβοτομίας
145r πότε κριτέον φλεβοτομίαν;
διὰ περίθλασιν τοπικήν;
πότε σικύαν;
πότε τὴν βδέλλαν;
διὰ ποίαν αἰτίαν τινὲς τῶν φλεβοτομουμένων ἐμοῦσιν;
πόθεν αἱ φλέβες πεφύκασιν;
τί ἐστι φλέψ;
145v περὶ αἵματος

περὶ ἀνθρώπου

145v περὶ ἀνθρώπου καὶ τί ἐστιν ἄνθρωπος;

περὶ ὁλισθήματος

146r περὶ ὁλισθήματος

περὶ ἐξαρθρώματος

146v περὶ ἐξαρθρώματος

τῆς ἰατρικῆς αἱρέσεις

146v ὅτι τρεῖς εἰσιν αἱ τῆς ἰατρικῆς αἱρέσεις

περὶ διαφορᾶς νοσημάτων

146v περὶ διαφορᾶς νοσημάτων
τί ἐστι κάτοξυ;
τί ἐστι κακόηθες;
147r τί ἐστι χρόνιον νόσημα;
τί ἐστι μέσον νόσημα;
τί ἐστιν ὀλέθριον;
τί ἐστι περιεκτικόν;
τί ἐστιν κινδυνῶδες;
τί ἐστιν ἀκίνδυνον;
τί ἐστι ῥοώδης πυρετός;
147r τί ἐστι γαστήρ;
147v ἆρα οὖν ἔχει τὸ ἧπαρ περιττώματα καὶ ἡ γαστήρ;
τί ἐστι νόσημα;
τί ἐστι νεῦρον;
τί ἐστι χιτών;
τί ἐστι μῦς;
148r τί ἐστιν ὀστοῦν;
τί ἐστι δηλητήριον;
τί ἐστι πιμελή;
τί ἐστι σάρξ;
τί ἐστι χόνδρος;
τίνα τὰ τηλέφια;
148v τίνα τὰ χειρώνεια;
περὶ ψιλώσεως
περὶ διαχωρημάτων
περὶ πύου
περὶ ἱδρώτων

ἐκ τῶν ἀφορισμῶν

149r ἐκ τῶν ἀφορισμῶν
γαληνοῦ
ἐκ τῶν ἀφορισμῶν
τοῦ ἁγίου ἀθανασίου
πᾶσα γὰρ ἀμετρία αἰτία νοσημάτων καθίσταται

3. The Mangana *xenôn* and associated passages in codex *Vaticanus graecus* 299

Passages attributed either to the Mangana *xenôn*, to "the *xenôn*", or to a named physician identified in passages 5, 7, 9 and 13 below as a member of the Mangana *xenôn* appear in codex *Vaticanus graecus* 299. These passages discussed in chapter 6 are referred to in the study as the *Mangana passages* and are numbered in accordance with Table 6.1.

The text of these passages is presented below. It is transcribed from codex *Vaticanus graecus* 299. A number of these passages correspond to some chapters in the προσταγαί and share a common source.

The assembly of all the *Mangana passages* here provides a record of this *xenôn*'s extant medical texts as well as a source of reference for chapter 4.

1.* Vaticanus graecus *299, ff. 276r, l. 28–278r, l. 17 (=* Prostagai, *chapter 1)

ρλ΄ ἐκ τοῦ ξενῶνος · περὶ πυρετῶν · ὅσα ἐκ πείρας ἰατρῶν παῖδες τοῖς πυρέσσουσιν ἰατρείας χάριν προσάγουσι · καὶ τοῖς ἄλλως πως [276v] πάσχουσι · μάλιστα δὲ ἐν τοῖς ξενῶσιν.

ἐὰν πυρέσσῃ ὁ ἄρρωστος καὶ πρωΐ καὶ δείλης, τουτέστιν ἐὰν συνεχῆ πυρετὸν ἔχῃ, ἐν μὲν ταῖς πρώταις ἡμέραις, πρόσταξον τὸ ῥόδινον ἔλαιον εἰς τὸ σπλάγχνον αὐτοῦ ἄχρι τῆς τρίτης, ὅπερ δέχεται κρόκα ᾠῶν καὶ ῥόδινον ἔλαιον καὶ ἄνθη χαμαιμήλων.

μετὰ δὲ τὴν τετάρτην ἡμέραν, προϋπαλειφέσθω τὸ σπλάγχνον αὐτοῦ ἁπαλῇ χειρὶ χαμαιμήλινον ἔλαιον ἢ ῥόδινον ἔλαιον πρὸς τὸ μέγεθος τοῦ πυρετοῦ · καὶ μετὰ ταῦτα πρόσταξον ἐπίθεμα χαλαστικόν · εἰ μὲν ὀξύς ἐστιν ὁ πυρετός, ἐπιτηδείως ἀπὸ ἀνδράχνης · ὅπερ ἐπιδέχεται κρόκα ᾠῶν καὶ ἀνδράχνην χλωράν · εἰ δὲ μὴ ἔχῃς ἀνδράχνην, ἐπίβαλε ἴων φύλλα · καὶ ῥόδα ἐρυθρά · ἔψημα καὶ ῥοδόσταγμα · καὶ κρόκα ᾠῶν · ἐὰν δὲ ἐπιδέχεται ἡ γαστὴρ αὐτοῦ, σφοδροῦ μὲν ὄντος τοῦ πυρετοῦ, καὶ ἔνεμα πρόσταξον · ὅπερ καλοῦμεν ἁπαλόν · ἤτοι μέλι καὶ ἔλαιον. ἅλας καὶ ὕδωρ θερμόν · εἰς δὲ τὸ σπλάγχνον αὐτοῦ ἐπίθεμα χαλαστικόν.

σφοδροῦ μὲν ὄντος τοῦ πυρετοῦ, χυλοῦ ζωμὸν καὶ ἔψημα · πολύειδον · ἤγουν ἀγρίαν μαλάχην · ἀλθαίας · ἄνθη χαμαιμήλων · λινόσπερμα καὶ κριθάλευρον.

λεπτοτάτου δὲ ὄντος τοῦ πυρετοῦ καὶ ἐλαφροτέρου, πρόσταξον ἔψημα · χυλόζωμον · κρόκα ᾠῶν, καὶ κοπτὰ χαλαστικά · ὅπερ δέχεται ἀλθαίας · χαμαίμηλον · θλάσπιν · κενταύριον · ἀβρότονον · καλάμινθον καὶ ἐξ αὐτῶν γενέσθω τὸ ἐπίθεμα · εἰ δὲ σφοδρά ἐστιν ἡ τῆς γαστρὸς ἐποχή, πρόσταξον σὺν τούτοις καὶ κυκλάμινον καὶ χαμαιάκτης φύλλα · γίνεται γὰρ κάλλιστον ἐπίθεμα χαλαστικόν · συγχριέσθω δὲ καὶ ἡ ῥάχις καὶ τὸ σπλάγχνον σὺν τῷ λοιπῷ σώματι ·

σφοδροῦ μὲν ὄντος τοῦ πυρετοῦ, ἔψημα χυλόζωμον · ῥοδόσταγμα · ῥόδινον ἔλαιον · ὑδροροσᾶτον · χλωρᾶς κολοκύνθας · τὰ ξέσματα τῶν χυλῶν καὶ χυλὸν ὀμφάκινον σταφυλῆς · εἴ γέ ἐστι καιρὸς ἐπιτήδειος ·

εἰ δὲ οὐκ ἔστι πάνυ σφοδρὸς ὁ πυρετός, συγχριέσθω τὸ θερμὸν χαμαίμηλον · εἴτε θερμὸν ῥόδινον · ἀλλὰ καὶ τὸ θερμὸν χαμαίμηλον τοῖς μὴ ὑδροῦσι · καὶ ἐν τῷ χειμῶνι μάλιστα ἁρμόζει · τὸ δὲ θερμορόδινον, διαφορητικώτερον τοῖς ὑπομένουσιν ἱδρῶτας, καὶ θέρος ἁρμόζει.

ἔστι δὲ [277r] καὶ ἄλλο ἐπίθεμα χαλαστικὸν διὰ πείρας · ἔψημα · χυλὸν ζωμοῦ · ἀλθαίας · ἄνθη χαμαιμήλων · λινόσπερμα · λινόζωστιν ἤγουν παρθενούδιν καὶ πολύειδον · ἤγουν ἀγρίαν μαλάχην · κυκλάμινον · χαμαιάκτης φύλλα ἤγουν κουφοξυλέας · γίνεται ἐπίθεμα κάλλιστον · ληξοπύρετον ·

καιροῦ ὄντος ἐπιτηδείου, καὶ τοῦ ἠριγέροντος χλωροῦ μετὰ ἄνθους τῶν χαμαιμήλων καὶ κρόκων ᾠῶν · καὶ ἔψημα καὶ λινόσπερμα · καὶ τὴν ἀνδράχνην καὶ τὰ ἰόφυλλα · ἔστι δὲ ἀνδράχνη ὅπερ καλεῖται χειροβότανον ·

τὴν δὲ ὀγδόην ἡμέραν, ἢ τὴν δεκάτην, πρόσταξον φλεβοτομίαν · σφοδροῦ μὲν ὄντος τοῦ πυρετοῦ καὶ τῶν οὔρων ἐρυθρῶν ὑπαρχόντων · καὶ ἀγρυπνίας συνεδρευούσης · καὶ ὀδύνης εἰσ τὴν ἕκτην ἡμέραν · εἰ δὲ μή, εἰς τὴν ὀγδόην ἢ τὴν δεκάτην · πρὸς γὰρ τὴν δύναμιν τοῦ κάμνοντος καὶ τῆς ἐπεχομένης νόσου, καὶ ὁ τρόπος τῆς φλεβοτομίας γίνεται ·

μετὰ δὲ τὴν τεσσαρεσκαιδεκάτην ἡμέραν, πρόσταξον [. . .] χαλαστικήν · ἢ ἐμβροχήν, σφοδροτέρου ὄντος τοῦ πυρετοῦ δηλονότι · ἐλαφροτέρου δὲ

ὑπάρχοντος, χαλαστικὴν ἄθερμον ἐὰν προστάξῃς ἁπλῶς, οὐ μὴ βλάψῃ · δέχεται μὲν γὰρ ἡ ἄθερμος ἐμβροχή, ἔψημα χυλοῦ ζωμοῦ · ἀλθαίας φύλλα · χαμαιμήλων ξύλα · καὶ θλάσπιν κεκομμένην καὶ πίτυρα καὶ κόμην · λινόσπερμα καὶ ἀψίνθιον διὰ τὸν τόνον τοῦ σπλάγχνου ·

εἰ δὲ χαλαστικά, ἀλθαίας ξύλα · χαμαίμηλον · κενταύριον · ἀβρότονον · καλάμινθον · ἀψίνθιον · χυλοῦ ζωμόν · ὕδωρ ὄμβριον · καὶ πυρίαζε τὸν πάσχοντα μετὰ ῥακέος ἡμέρας τρεῖς · μετὰ δὲ τὴν πυρίαν, πρόσταξον ἐπίθεμα ἰδιοτέρως ὅπερ δέχεται ἔψημα χυλόζωμον · ἀλθαίας φύλλα · ἄνθη χαμαιμήλων · λινόσπερμα · κρίθινον ἄλευρον καὶ τῆλιν ·

ἐὰν δὲ ἐπεκτείνεται ὁ πυρετὸς εἰς μῆκος χρόνου καὶ ἔτι συμπτώματα ἐπιφέρων, δεῖ προστάττειν καὶ δευτέραν φλεβοτομίαν, καὶ τρίτην · τῆς δυνάμεως μηδὲν ἐμποδιζούσης · καὶ μάλιστα εἰ καὶ σεσημμένου τοῦ πρότερον κενωμένου αἵματος ὄντος ·

ἡ δὲ τροφὴ τούτου ἔστω, σφοδροῦ μὲν ὄντος τοῦ πυρετοῦ, χυλοῦ πτισάνης ψῖχες · καὶ δαμασκηνῶν ξηρῶν ἢ χλωρῶν · καιροῦ δηλονότι ἐπιτηδείου ὄντος · κεράσια · τρέμουσα · θασόροφον · ἰτρόγαλα, μετὰ χυλαρίου · πολλάκις δίδου καὶ θριδακίνας · ὑγραίνει γὰρ καὶ ὕπνον ἐπιφέρει · καὶ δαμασκηνὰ ὠάτα · καὶ σταφυλήν · εἰ μὲν εὕρῃς [277v] τὴν ἀετώνυχον · εἰ δ' οὐκ, τὴν κοινήν. ὠφελεῖ δὲ καὶ τὸ μελίκρατον πινόμενον · καὶ τὸ εὔκρατον ὕδωρ καὶ τὸ θασόροφον · εἰ δὲ δίψαν ἔχει ἐνοχλοῦσαν, τὸν νοσοῦντα. καὶ κάππαριν πρόσταξον ἐσθίειν πρὸ τροφῆς ·

περὶ τοῦ ὀξυμέλιτος δηλονότι καὶ τὸ ὀξύμελι αὐτοῖς ἁρμόζει πίνειν, οὐχὶ τὸ σύνθετον, ἀλλὰ τὸ ἁπλοῦν · ὅπερ δέχεται μέλι τὸ κάλλιστον καὶ ὄξος δριμύτατον ἐξ ἴσου · ἑψεῖται δὲ ἄχρι συστάσεως ὥστε ἐξισάζειν ἀμφότερα · δίδου δὲ ἐπὶ τῆς χρείας μεθ' ὕδατος θερμοῦ πίνειν ·

βληχροῦ δὲ ὄντος τοῦ πυρετοῦ, ἐπίταττε σεῦτλον ἐσθίειν μετὰ ὄξους καὶ ἁλῶν · ἢ καὶ σὺν ἐλαίῳ ὀλίγῳ ἐμβαλλομένῳ εἰς τὴν ἕψησιν τοῦ λαχάνου · δίδου δὲ καὶ χρυσολάχανα καὶ κολοκύντας · καὶ μαλάχην κατὰ τὰς ὥρας · ἢ κρόμμυα μετὰ ἐλαίου τὰ καλούμενα περδίκια · ἀπὸ τῆς εἰκοστῆς ἡμέρας καὶ εἰκοστῆς πρώτης καὶ ἐνδότερον τούτων πρόσταττε · λοῦε δὲ καὶ ἅπαξ καὶ δὶς πρὸς τὸ εἶδος τοῦ πυρετοῦ ἀποβλέπων ·

ἐὰν ἐπιδέχεται ἡ γαστὴρ καὶ ἀντιπράττει πρὸς τὴν λύσιν τοῦ πυρετοῦ, σφοδροῦ μὲν ὄντος, ἐνέματα ποιοῦ ἐκ τῶν ληξιπυρέτων, ὡς καὶ ἀνωτέρω εἴρηται. οἶον ἔψημα · χυλόζωμον · ὑδροροσᾶτον · χλωρὰs κολοκύνθας · χυλὸν καὶ ῥόδινον ἔλαιον · καὶ κρόκα ᾠῶν ·

παρεκτεινομένου δὲ τοῦ πυρετοῦ, καὶ διὰ βοηθήματος τῆs γαστρὸς προνοητέον · πολλάκις δὲ καὶ τὸν κοινὸν κλυστῆρα ἰατρεύεσθαι ὡς δέχεται καὶ ὡς εἴρηται μέλι κοινὸν, ἔλαιον κοινὸν καὶ ὕδωρ θερμὸν καὶ ἅλας ·

βοηθήματα λυτικὰ γαστρος ἐπὶ τῶν πυρεσσόντων · ἔστι τοῦ κνήκου τὸ σπέρμα κεκαθαρμένον στάγιον α΄ · πινόμενα μετὰ εὐκράτου · μέλιτος ὅσον στάγια β΄ καὶ γ΄ · μαστίχην · καλόν ἐστι καὶ πέπλιον νεόκοπον, ὅσον κεράτια ζ΄ ἢ ε΄ · ἢ θ΄ μετὰ εὐκράτου μέλιτος ·

μὴ ὄντος δὲ σφοδροῦ τοῦ πυρετοῦ, πρόσταξον καὶ μετὰ τοῦ πικροῦ τροχίσκου τὸ πέπλιον · ἔστω δὲ ἀκέραιος ὁ τροχίσκος ἢ τὸ ἥμισυ · τὸ δὲ πέπλιον, πρὸs τὴν δύναμιν τοῦ κάμνοντος · ἐὰν δὲ ἔτι χρονίζῃ ὁ πυρετός, πρόσταξον καθαρτήριον, εἰς τὸ ὑδροροσᾶτον · ἢ εἰς τὸ ῥοδόμελι τὸ ἁπλοῦν · ἢ τὸ καθαρτικὸν μετὰ σκαμμωνίας δηλονότι · τὸ δὲ ποσὸν τῆs σκαμμωνίας, ἔστω πρὸς τὴν δύναμιν τοῦ κάμνοντος, ἤγουν κεράτια ζ΄ ἢ ἐννέα · ἢ [278r] ια΄ · ἢ ιγ΄ · ἢ ιε΄ ·

μετὰ δὲ τὸ καθάρσιον εἰ ἐναπομείνῃ λείψανον τοῦ πυρετοῦ, πρόσταξον σύγχρισμα, ἢ τὸ θερμοχαμαίμηλον · ἢ τὸ βενεύσιον · ἢ τὸ ἰέλαιον · ἢ τὸ παλαιὸν πάνυ ἰέλαιον · συγχριέσθω δὲ ὡς ἐπὶ πλεῖστον εἰς τὸ λουτρόν · γινέσθω δὲ συνεχέστερον πρὸς τὰ λουτρὰ τὰ ἀπὸ γλυκέων ὑδάτων ·

εἰ δὲ καὶ τὰ σπλάγχνα πάσχει, κατάπλαττε τὸ δίσπερμα ·εἴτε τὸ τρίσπερμα · καὶ μετὰ ταῦτα τὸ σύνθετον ἔμπλαστρον τὸ καλούμενον κοπτόν · τὸ γὰρ δίσπερμον, ἐπιδέχεται ἕψημα χυλοῦ ζωμόν · κριθάλευρον, λινόσπερμα · τὸ δὲ τρίσπερμα ἐπὶ τούτοις, καὶ τὸ τήλινον ἄλευρον καὶ λούπινον · τὸ δὲ σύνθετον, ἐπιδέχεταιφοινίκια ·σταφίδας · ἰσχάδας · δαμασκηνὰ ψυκτά · λινόσπερμα · τῆλιν · θέρμινον ἄλευρον · ἀλθαίας ἄνθη · κυάμινον ἄλευρον · στέαρ χήνειον καὶ ὀρνίθειον · καὶ χοίρειον καὶ βόειον · καὶ μυελὸν ἐλάφου · ἀνηθέλαιον · χαμαιμηλέλαιον καὶ ἀμμωνιακόν · καὶ πρόπολιν ·

ἀνετήν · μνάσιον καὶ διὰ μέλιτος · πεντάθετον καὶ τετραφάρμακον · σὺν τούτοις πᾶσι, καὶ φοινίκια πατητά · δεῖ δὲ ἀποβρέχειν τὰς ὀπώρας ἀκεραίας νυχθήμερον εἰς τὸ λεγόμενον σίραιον, ἤτοι ἕψημα · καὶ εἶθ᾽ οὕτως, κοπάνισον καὶ ποίησον τὸ μέγα κατάπλασμα.

2. Vaticanus graecus *299, f. 307r, ll.7–18 (*= Prostagai*, chapter 2*)

σνα´ πρόσταξις τοῦ ξενῶνος τῶν μαγγάνων · πρὸς κεφαλαλγικούς · ἐὰν δὲ καὶ ὀδυνᾶται τὴν κεφαλὴν ὁ ἀνακλιθεὶς ἄρρωστος, δεῖ προστάττειν ἀνακολλήματα εἰs τὸ μέτωπον αὐτοῦ κρόκον ὠοῦ · ἀλθαίας ὀλίγον καὶ ὠκίμου σπέρμα · καὶ τοῦ σκορπιούρου · λίβανον καὶ ὄξος · ἢ ἐκ τοῦ τροχίσκου τοῦ κατωτερικοῦ μετὰ ὄξους · ἢ γῆς ἔντερα ἑπτὰ μετὰ ὄξους · καὶ πεπέρι ἢ μαστίχην · μάλιστα εἰ καὶ ἡμικρανία ἐνοχλεῖ αὐτόν · θερμοῦ δὲ ὄντος καὶ ὀξορόδινον πρόσταξον · ἵνα ἀλείφῃ τὴν κεφαλὴν αὐτοῦ χλιαρόν · ἢ τὸ χαμαίμηλον μόνον · χειμῶνος δὲ ὄντος, πρόσταξον ἀνηθέλαιον · ἢ πηγανέλαιον ἀλείφεσθαι · ἢ ἐψηθῆναι μετὰ ἐλαίου, σπόνδιλον · ἤγουν σέσελι · γλίχωνα · ἕρπυλον · καὶ ἀλείφειν τῆν κεφαλήν · εἰ δὲ ἐπὶ πλέον ἐνοχλεῖ τὸ πάθος, καὶ καθαρσίῳ πρόσταξον ἐπιτήδειον · καὶ ἀποφλεγματισμόν · ἢ καὶ αἷμα ἀπὸ τῆς ῥινὸς ἀφαιρείσθω · ἢ συκιαζέσθω.

3. Vaticanus graecus *299, f. 322v, l. 27–323r, l. 4*

τξη´ στεφάνου βασιλικοῦ ἰατροῦ τοῦ μαγίστρου · ὀφείλει εἰσβαλεῖν μέλι εἰς χυτρίδιν · καὶ οἶνον καὶ φακήν · σίδια · φύλλα μυρσίνης · ῥόδα ἀκοπάνιστα πάντα · καὶ ἑάσας βρᾶσαι καλῶς · σακελίσας εἰς πανίον λεπτόν · καὶ μετὰ τὸ χλιανθῆναι κλύζε εἰς τὸ ὠτίον καθ᾽ ὅ δέχεται. τοῦτο γὰρ δόκιμόν ἐστὶν ἐπὶ τῶν ἐχόντων ἐν τοῖς ὠσὶ πολὺ πύον · τοῦτο ποίει κατὰ τὸ πρωΐ · καὶ ἡ πυρία διὰ σπόγγου καὶ θερμοῦ ὕδατος ἐκτεθλιμμένου σπόγγου τὰς ὀδύνας παρηγορεῖ · ἢ μέλι καὶ ὄξος θερμάνας, στάζε εἰς τὸ οὖς καὶ θαυμάσεις.

4. Vaticanus graecus *299, f. 344v, ll.13–345r, l. 12*

υπε´ (tit. in marg.) περὶ κυνάγχης λέοντος ἰατροῦ πιττάκιν σταλὲν ἀ[. . .] πὸ θεσσαλονίκης νικηφόρῳ καίσαρι δεσπότῃ τῷ μελισηνῷ, [. . .] πρὸς ἰατρὸν θεόδωρον περὶ κυνάγχης νόσου καὶ τοὺς [. . .] ἰατροὺς βερροίας τί ὀφείλουσιν χάριν σωτηρίας προσάγειν αὐτῷ [. . .] μηνὶ δεκεμβρίῳ εἰs τὴν κη´ ἔτους δ´^{ου} ἐὰν

ὑπάρχῃ τὸ νόσημα [. . .] κυνάγχης, πρὸ παντὸς ἄλλου, ποιεῖται ἐργαλεῖα καθ᾽ ἑκάστην δρι [. . .] μύτερα. καὶ φλεβοτομίαν ἐκ τῶν δύο χειρῶν αὐτοῦ τὰς κρανιακὰς [. . .] φλέβας · καὶ κενούσθω ἠρέμα, μία ἑκάστη κένωσις ἓξ ἢ ἑπτὰ οὐγγίας καὶ μὴ περισσότερα · καὶ μηδὲ τὰ ὑπογλώττια αὐτοῦ κεντήσετε ὅλως · μετὰ δὲ τὰς φλεβοτομίας, ποιεῖτε δεσμοὺς καὶ τρίψεις μετὰ τῶν βρόχων εἰς τοὺς βραχίονας αὐτοῦ · ἰσχυρῶς δεσμουμένων · καὶ ἡ τρίψις ὑποκάτωθεν τῶν βρόχων, ἄχρι τῶν ἄκρων τῶν χειρῶν αὐτοῦ · ἢ ἐντὸς θερμοῦ ὕδατος, ἢ ἐπάνω καρβώνων ὁμοίως δὲ καὶ εἰς τοὺς πόδας αὐτοῦ, γενέσθωσαν οἱ βρόχοι ἐπάνωθεν τῶν γονάτων αὐτοῦ · αἱ δὲ τρίψεις, ὑποκάτωθεν τῶν βρόχων, ἄχρι τῶν ἄκρων τῶν ποδῶν αὐτοῦ · ἢ εἰς θερμὸν τοὺς πόδας αὐτοῦ γενέσθω, ἢ εἰς πυρὰν καρβώνων · πυρίας δὲ ποιεῖτε συνεχεῖς καὶ πολλὰς μετ᾽ ἐλαίου ἐν ᾧ ἀφεψήθη ἄνιθον χλωρόν · ἡδύοσμον χλωρὸν καὶ γλίχων · καὶ βραχέτωσαν εἰς ἔλαιον μαλία ἄπλυτα · καὶ ἐπιτιθέσθωσαν εἰς τὸν λαιμὸν αὐτοῦ [345r] γύρωθεν θερμά. ἀπέστειλα δὲ αὐτῷ, καὶ διὰ μόρου · καὶ ποίησον αὐτῷ ἀναγαργαρισμὸν μετὰ θερμῶν ὑδάτων συνεχῶς · τροφὴ δέ, κριθόχυλον θερμὸν μετὰ σακχάρεως · καὶ ἀμυγδαλέλαιον ἢ ἔψημα συγκεκερασμένον θερμῷ ὕδατι ἄχρι τῆς ἑβδόμης ἢ ὀγδόης · μετὰ δὲ ταύτας, γενέσθω θεραπεία τοιαύτη · εἰς τὸν λαιμὸν αὐτοῦ ἔξωθεν, τίθει λινόσπερμα · ἄλευρον κρίθινον καὶ βούτυρον καὶ μέλι καὶ πήγανον · ἢ χυλὸν ἡδυόσμου μετὰ ὕδατος ὀμβρίου · μετὰ σαμψύχου καὶ θείου ἀπύρου θερμά · γύροθεν · τοῦτο δὲ εἰς κυνάγχην καὶ εἰσ παρισθμίων φλεγμονὴν καὶ περιπνευμονίαν λυσιτελεῖ · εἶχον δὲ κἀγώ, εὐστάθιε, καὶ τούτου πεῖραν παρὰ πολλῶν ἰατρῶν · ἀναγαργαρισμοὺς δὲ ποίει φακῆς ἀφεψήματι μετὰ ἐψήματος · ὡσαύτως καὶ ἄλφιτα ἀποβεβρεγμένα σὺν γλυκεροῦ χυλῷ · καὶ χυλῷ γλυκυρρίζης · πυρίας δὲ κατὰ τοῦ λαιμοῦ · λίγα νήμματα ὠμὰ ζεννύμενα ὕδατι καὶ ἐπιτιθέμενα γύροθεν τοῦ λαιμοῦ.

5. Vaticanus graecus *299, f. 368r, ll. 19–23*

χη´ εἰs ἔμφραξιν στομάχου . . . ἄλλο δοθὲν παρὰ θεοδώρου ἰατροῦ τῶν μαγγάνων μαράθρου σπέρματος · ἀψίνθης · ὀροβίνου ἀλεύρου · μαστίχης ὀλίγης μέλιτι ἑψήσαs μετὰ ὀλίγου νάρδου, ὑποθυμία · πεπειραμένον γάρ ἐστιν ἴρινον χλωρὸν ἐσθιόμενον καὶ ἐν ὕδατι ἑψόμενον καὶ πινόμενον ·

6. Vaticanus graecus *299, f. 368r, ll. 25–368v, l. 7 (*= Prostagai*, chapter 7*)

χι´ πρόσταξις στομαχικὴ τοῦ ξενῶνος τῶν μαγγάνων · εἰ δὲ ἀνακλιθεὶς ἄρρωστος στομαχικῶς πάσχων · ἔστι δὲ καὶ ἄνευ πυρετοῦ, πινέτω τὸ ὀξύμελι · ἢ τὸν ὑγρὸν διοσπολίτην · ἢ τὸ διὰ τριῶν πέπερι · ἢ τὸ διὰ καλαμίνθης · μετὰ οἴνου δηλονότι καὶ κατὰ ψυχρὰν δυσκρασίαν πάσχοντος · εἰ δὲ καὶ κατὰ θερμὴν δυσκρασίαν πάσχει εἴτουν ἀπὸ ξανθῆς χολῆς, [368v] δίδου τὸ ὀξύμελι ἢ ἀψίνθιον · ἐνίοτε καὶ ἐμετικόν · ἢ τὸ ἀπὸ τῆς ἀγρίας κανάβης, κεράτια ιη´ μετὰ μέλιτος εὐκράτου, ἢ ἀπὸ τῆς θαψίας · πρόσταξον δὲ καὶ καταπλάσματα, τὸ δίσπερμον · ἢ τὸ τρίσπερμον · καὶ τὸ σύνθετον · καὶ μετὰ τὸ λουσθῆναι καὶ ἅπαξ καὶ δίς, πρόσταξον καὶ ἔμπλαστρον τὸ κοπτόν · ἢ τὸ διὰ δαφνῶν · ἢ τὸ διὰ μελιλώτων · ἢ τὸ διὰ τῶν σπερμάτων · ἢ τὸ πολυάρχιον · ἢ τὴν χρυσήν · καὶ μάλιστα χειμῶνος · καὶ σωμάτων ὑποκειμένων ψυχροτέρου καὶ πυρετοῦ μὴ ὄντος.

7. Vaticanus graecus *299, f. 368v, ll. 7–29*

χια΄ ἐπιστολὴ ἀπὸ θεσσαλονίκης παρὰ στεφάνου ἀρχιϊατροῦ τῶν μαγγάνων πρὸς ἰωάννην ἐξάκτορα ἰατρὸν τὸν χαλὲ περὶ στομαχικῶν σπληνικῶν καὶ ἡπατικῶν · ἐξ ὧν σοι χρεία γέγονε περὶ στομαχικῶν σπληνικῶν καὶ ἡπατικῶν θεραπειῶν, τάδε σοι γράφω, φίλτατέ μοι ἀδελφέ · ἄρτον λίαν καθαρόν · ὃ εὐφράτον καλεῖται · ἀπόβρεχε οἴνῳ παλαιῷ ὀλίγῳ, ὅσον δραχμὴν α΄ ἔχοντος τοῦ ἄρτου · καὶ φοινίκια ιη΄ · καὶ ὀλίγου ἐψήματος · εἶτα μετὰ τὸ βραχῆναι καλῶς, κόπτε ἀκριβῶς ὅλμῳ ἕως ἂν λυθέντα, ἐνωθῶσι τῷ ἐψήματι καὶ τῷ οἴνῳ · εἶτα ἔψει καλῶς λίαν καὶ ἐπιμελῶς · καὶ μετὰ τὸ ἑψηθῆναι, ἐπίβαλε ἀψίνθιον · κεκομμένον καὶ σεσημένον ἑξάγια δ΄ · καὶ στάχους ὀβολὸν α΄ · ῥόδων ἑξάγια δ΄ · καὶ ἐκ τῶν ἀφύσων σπερμάτων · ἤγουν ἀγνόκοκκα καὶ σπέρματα μαράθρου καὶ σελίνου καὶ ἀνίθου ἀνὰ ὀβολὸν α΄, καὶ ἰατρεύου μετὰ στούπου · ὅταν ὑπάρχῃς εὔπεπτος · ἀπὸ δὲ τῶν ἐντός, ἵνα πίνῃς ῥοδοσάκχαρον · μετὰ ἀνίσου καὶ μαστιχίου · ὀφείλει δὲ βαλεῖν εἰς χυτρίδα, οἶνον παλαιὸν χιωτικόν · ξυλαλόην ὑγράν · ἡδύοσμον καὶ πήγανον ὀλίγον καὶ ἑψεῖν · καὶ λαμβάνειν ἐξ αὐτοῦ, ποτὲ μὲν μετὰ ῥοδοσάκχαρος · ποτὲ δὲ καὶ καταμόνας · εἰ δὲ καὶ χολὴν ποιεῖς ἐξ αὐτοῦ, ἔα μὲν ταῦτα · κατὰ τὸν θερινὸν καιρόν, καὶ μάλιστα ὅταν τὰ κυνοκαύματα · συχνάζειν δὲ μάλιστα τὸ φθινόπωρον καὶ τὸν χειμῶνα καὶ ἔαρ. τὸν δὲ στόμαχον καὶ τὸν σπλῆνα καὶ τὸ ἧπαρ συχνότερον πιττοῦν · ἤγουν μα στίχης δραχμὴν α΄ · πίσσης λίτραν α΄ · λιβάνου οὐγγία α΄ · ἀλόης οὐγγίας ς΄ · κόστου ῥίζης οὐγγία α΄ · ἀψίνθης οὐγγίας β΄ · στάχους οὐγγίαν ἡμίσειαν · ἀνίσου μαράθρου καὶ ἄγνου σπέρματος ἀνὰ οὐγγίαν α΄ · κόψον καὶ σῆσον λεπτῷ κοσκίνῳ · καὶ προαλείφων νάρδον ἢ μαστιχέλαιον, ἐπίπασον · καὶ ἐπάνω τούτων, τίθει στυπία · καὶ ὀθώνη περιειλίσσων, ἕα ἕως ἂν κρατῇ.

8. Vaticanus graecus *299, f. 374r, ll. 11–22 (cf. codex* Florentinus Laurentinus *Antinori 101, ff. 353v, ll. 6–21) (=* Prostagai*, chapter 5*)

χμ΄ περὶ ἡπατικῶν πρόσταξον ἐκ τοῦ ξενῶνος τῶν μαγγάνων · ὁ δὲ ἀνακλιθεὶς ἄρρωστος ἔχων ἧπαρ κακόν, εἰ μὲν ὑπάρχει πυρετὸς καὶ φλεγμονή, κατὰ μὲν ἄλλων ἵνα γένηται φλεβοτομία ἐκ τοῦ δεξιοῦ μέρους · πρὸς τὴν σφαγολυτίαν ἥπερ ἐστὶ κάτωθεν τῆς καθόλου παραμίαν φλέβα. ἤτοι τρίτην ἀπὸ τῆς καθόλου μέσον τῆς χειρὸς · ἢ κόψον ἐξ ἄκρας μετὰ τοῦ μικροῦ καὶ τοῦ παραμέσου δακτύλων · εἶθ' οὕτως πρόσταξον ἐπίθεμα τὸ ἐκ τῶν μελιλώτων φοινίκια μετὰ κρόκου ἀληθινοῦ · καὶ ῥόδων ἄνθη χαμαιμήλων · ἢ ἐκ τῶν φύλλων τῆς κράμβης τῶν ἁπαλῶν · μετὰ κρόκου ἀλθαίας · καὶ ἄνθη χαμαιμήλων · καὶ κρόκων ᾠῶν · δηλονότι καὶ ἐψήματος καὶ οἴνου καὶ λινοσπέρμου · τούτοις ἐνίοτε προσπλεκομένου · εἰ δὲ ἄνευ πυρετοῦ ἐστίν, ὠφέλιμον καὶ τὸ σύνθετον κατάπλασμα · προσπλεκομένου αὐτοῦ ἀψίνθιον ·

9. Vaticanus graecus *299, f. 374r, l. 22–374v, l. 4 (cf. codex* Florentinus Laurentinus *Antinori 101, ff. 353v, l. 21–354v, l. 7)*

χμα΄ τοῦ σαρακηνοῦ τοῦ ἀβραμ · καὶ ἀκτουαρίου τῶν μαγγάνων καὶ βασιλικοῦ ἀρχιατροῦ · βοήθημα καθαρτικόν · ἐπί τε ἡπατικῶν ἰκτερικῶν καὶ σπληνικῶν καὶ ἰσχιδιακῶν · ἀλιλέκχ · ἤγουν χρυσοβάλανον μέλαν ἰνδικὸν ἑξάγια β΄ · βελιλέκτου

ἤτοι χρυσοβαλάνου δέρματος κιτρίνου · ἐλίλκης ἤτοι χρυσοβαλάνου κιτρίνου ἀνὰ ἑξάγιας β΄ · ἐλιλικίβουλ · τουτέστι χρυσοβάλανον μέγα ἑξάγια β΄ · ἐμβλήκτου τουτέστι χρυσοβαλάνου σχιστοῦ μελανοῦ ἑξάγια β΄ · τούρβιδ. ὅ ἐστι ῥιζάριον σαρακηνικόν · ὃ λέγεται ἀλυπία · ἑξάγιον α΄ · βονεσφίκτου τουτέστιν ἴα βένετα ἑξάγιας β΄ · ῥόδα ἀληθινὰ ξηρὰ ἑξάγιον α΄ · χιτραγίδιν τουτέστι ῥιζάριον [374v] ἰνδικὸν ἑξάγια β΄ καὶ ἥμισυ · πι΄ ς΄ πεκ γ΄ · τουτέστι πολυπόδιν ἑξάγια β΄ · ἀγαρικὸν ἑξάγιον α΄, ἀνίσου ἑξάγιον α΄ · μαράθρου σπέρματος ἑξάγιον α΄ · χάπνηλ τουτέστι λουλακίον ἑξάγιον α΄ · χάνδαλ, τουτέστι κολοκυνθίδος κεράτια η΄ · ζίζιφακ · δαμασκηνὰ δέκα. σταφίδας ἐκγεγαρτισμένας οὐγγίαν α΄ · ὕδατος ποτήρια γ΄ · καὶ βάλον ἀποβραχθῆναι νυχθήμερα δύο · καὶ τότε ἔασον ζέσαι μέχρις οὗ λειφθῇ τὸ τρίτον · καὶ σακελίσης αὐτὸ. λάβε οὖν κεράτια πικρὰ ν΄ · σκαμμωνίαν κεράτια η΄ · μαστίχης κεράτια δ΄ · ζυλάπιν οὐγγίαν α΄ · ἕνωσον τὴν πικρὰν μετὰ τῆς σκαμμωνίας καὶ τῆς μαστίχης καὶ τὸ ζυλάπιν · καὶ βάλον τὸ ἀπόζεμα καὶ ἕνωσον ὁμοῦ καὶ πότισον αὐτό · ἔστι γὰρ δυνατὸν καθάρον, ἦπαρ σπλῆνα νεφρούς · ἰσχίον · κεφαλήν. δίδοται δὲ καὶ μελαγχολικοῖς καὶ σκοτοματικοῖς ἀθρητικοῖς · καὶ ἄλλοις οἳ δέονται ἰσχυρᾶς καθάρσεως. ἰστέον ὅτι · οἰκίαν ἔχει τὸ ἦπαρ τὸ αἷμα εἰς τὴν μορφὴν τοῦ κροτάφου.

10. Vaticanus graecus *299, f. 377v, ll. 5–16 (*= Prostagai, *chapter 6*)

χξ΄ πρόσταξις περὶ σπληνὸς τοῦ ξενῶνος τῶν μαγγάνων · ὁ δὲ ἀνακλιθεὶς ἄρρωστος σπληνικὸς εἴπερ ἐστί, δεῖ προστάττειν καταρχὰς μὲν φλεβοτομίαν ἐκ τοῦ ἀριστεροῦ μέρους σφαγολυτίαν · ἢ ἐξακρισμόν · μέσον τῶν δύο δακτύλων τοῦ τε μικροῦ καὶ τοῦ μετ᾽ αὐτὸν τῆς ἀριστερᾶς χειρός · ποτίζειν δὲ αὐτὸν τὸ σπληνικὸν σύγκομα · μετ᾽ ὀξυκράτου ἢ ὀξυμέλιτος · ὅπερ ἐπιδέχεται χαμαίδρυον πόλιον · φλοῦν καππάρεως · σκολοπένδριον σπληνοδάπανον · πρόσταξον οὖν, ἵνα ἀποβραχῇ καὶ ἀμμωνιακόν · καὶ λίβανον εἰς ὄξος δριμύ · καὶ ἐξ αὐτοῦ περίχρισον ἐν τῷ λουτρῷ, πρὸς τὸ ἀριστερὸν μέρος · δίδου δὲ καὶ τὸν πικρὸν τροχίσκον, καὶ ἀμμωνιακόν · ἐνίοτε καὶ εἰς κονδίτην ἀποβρεχόμενον καὶ πινόμενον · ὁμοίως καὶ τὸ χαμαίδρυον · ποίει δὲ καὶ ἔμπλαστρα σπληνικὰ τὴν κυτρίνην καὶ τὴν μέλαιναν οὐσίαν καὶ τὸ δημοκράτους.

11. Vaticanus graecus *199, ff. 381v, l. 19–382r, l. 2 (*= Prostagai, *chapter 8*)

χπζ΄ ἀπὸ τοῦ ξενῶνος τῶν μαγγάνων · ὅσοι δὲ εἰσ ὕδερον μεταπίπτουσι, οὗτοι καὶ μάλιστά εἰσὶν ὡς ἐπὶ τὸ πλεῖστον · ἢ σπληνώδη τὴν τιβεριάδα λεγομένην βοτάνην ἢ τὸ ἀγριοκάρδαμον ἐψήσας μετὰ ὀξυκράτου, πρόσπλεξον κριθάλευρον καὶ ἰσχάδας λιπαρὰς καταπλαττέσθωσαν πρόσταξον τούτους, καὶ τὸ δίσπερμον · καὶ τὸ τρίσπερμον · καὶ τὸ ἀρτόμελι · μάλιστα τοῖς στομαχικοῖς ἐστιν ἁρμόδια · ἀπὸ τοῦ λουτροῦ, πρόσταξον ἀλοιφὴν ἀπὸ τῆς ὕλης ἥτις δέχεται καὶ ἔλαιον · νίτρον · κύμινον · ἀγριοσταφίδα · ποίει καὶ κατάπλασμα ἀπὸ τῶν ὀσπρίων · ὅπερ ἐπιδέχεται κρίθινον ἄλευρον · λινόσπερμα τήλινον λούπινον φαβάτινον · πυρέθρον · βόλβιτα καὶ χυλὸν ἀγριοσυκῆς. ἤτοι ἐλατήριον · ποίει δὲ καὶ ἐκ τῶν σπερμάτων. ὅπερ ἐπιδέχεται ἄνισον · κύμινον · σέλινον · κωδίας · [382r] μάραθρον · ἀγνόκοκκον · δαφνήδιον γλήχωνα. ἑλλέβορον ἤγουν καρπόν · χυλοζώμιον.

12. Vaticanus graecus *299, ff. 406v, l. 28–407v, l.20 (=* Prostagai*, chapter 4)*

ωξη΄ πρόσταξις τοῦ ξενῶνος τῶν μαγγάνων · περὶ κοιλιακῆς διαθέσεως · ὁ δὲ ἀνακλιθεὶς ἄρρωστος, εἰ μὲν ὑπάρχει κοιλιακός, καὶ τὰ διαχωρήματα θερμά, πρόσταξον ἀλείφειν τὸ ἰσχίον αὐτοῦ τὸ ὑπογάστριον σχινέλαιον · πρὸς δὲ [407r] ἐπίθεμα πολύγονον · ῥόδα ἀληθινά · μαστίχιν μετὰ κρόκου σὺν τῷ λευκῷ ὠοῦ καὶ οἴνῳ · εἰ δὲ ἐπιμένει ἡ φορά, εἰς μὲν τὸ ἐπίθεμα, ἐπίβαλε σμυρνοβάλανον · μαστίχην · ἀλόην ἀκακίαν · χυλὸν ὑποκυστίδος · χυλὸν ἀρνογλώσσου · χυλὸν πολυγόνου · στυπτηρίαν σχιστήν · μετὰ κρόκων λεπτῶν καὶ οἴνου · βοηθήματα δὲ ἐσπερινὰ ποίησον, τὸ διὰ μελικράτου · ἢ τὸ διὰ κωδίων · ἐν μὲν ταῖς ἀρχαῖς μόνον · ἔπειτα δὲ μετὰ χυλοῦ ὑποκυστίδος ἢ ἀρνογλώσσου · πρόσταξον δὲ καὶ τὸ ὑδροροσᾶτον καταμόνας. καὶ τροχίσκον τὸν διὰ σπερμάτων μετὰ οἴνου ἢ μετὰ κονδίτου · εἰ δὲ ἔτι φέρεται ἡ γαστήρ, πρόσταξον καὶ στυπτικὴν πυρίαν · ἤγουν σίδια βαλαύστια · σμύρναν · σφαιρία κυπαρίσσου · βάτου ῥίζαν · ταῦτα ἑψῶν μετὰ ὀξυκράτου · καὶ πυρίαζε τὸν πάσχοντα ἐξ αὐτῶν μετὰ ῥάκους · γίνεται δὲ ἐκ τούτου καὶ συγκοπὴ καὶ ἀναμίγνυται τοῖς προλεχθεῖσι στυπτικοῖς · καὶ ἐξ αὐτῆς γίνεται τῆς πυρίας τὸ ἐπίθεμα · καὶ τὸ πρωῒ πρόσταξον πολύγονον καὶ πεντάφυλλον μετὰ οἴνου · ἢ κικίδιν μετὰ σεμιδάλεως διδόναι. εἰ δὲ ὑπάρχουσι ψυχρὰ τὰ διαχωρήματα, ποίησον πυρίαν τονωτικήν · ἤγουν ῥόδα · οἰνάνθην ἀψίνθην · κυπέρου καὶ οἴνου · καὶ ἐξ αὐτοῦ γενέσθω συγκοπή · καὶ ἀναμιγνύσθω τοῖς προλεχθεῖσι στυπτικοῖς · ἐσπερινὰ δὲ βοηθήματα, πρόσταξον χυλὸν κυδωνίτου ἢ τοῦ Φίλωνος · ἢ τὸν πάγχρηστον τροχίσκον · τοῦ δὲ Φίλωνος ὠφελεῖ, καὶ τοὺς διὰ θερμὴν διάθεσιν ἢ ψυχρὰν πάσχοντας · εἰ δὲ ἔτι φαίνεται ἡ γαστὴρ πονηρότατα εἰς τὰ διαχωρήματα ἤγουν πολύμορφα · ἢ καὶ ἡπατικὰ καὶ πλύμασι κρεῶν νεοσφαγῶν ἐοικότα, σὺν πᾶσι τούτοις δεῖ προστάσσειν, καὶ τὰς μεγάλας ἀντιδότους τῆς ἐκλογῆς τοῦ Ἔσδρα. τὸν τροχίσκον τοῦ ῥοδίνου · εἰ δὲ καὶ εἰς δυσεντερίας μεταπέσῃ ὁ πάσχων, πρόσταξον σὺν τοῖς προρρηθεῖσιν, καὶ ἐνέματα διὰ γαστρός · πρῶτον μὲν τὸ οἰνόμελι · μάλιστα τενισμὸν ἐνοχλούντα, ὅτε δεῖ προστάσσειν, καὶ ἐγκαθεσμούς, ἵνα ζεσματίσθωσιν ἄχυρα μετὰ καχλάζοντος θερμοῦ εἰς κοφίνιν μικρόν · καὶ καθέζεται ὁ πάσχων καὶ πυριώμενος τὴν ἕδραν · πύρωσον δὲ καὶ βύσαλα δύο ἢ τρία πυρωθῆναι εἰς ἀνθρακίαν καὶ βραχῆναι ὄξει δριμεῖ ἐπιρρεομένῳ γλήχωνα · ἄνθ᾽ ὧν τὸ μὲν ἐπίθες τῷ ὀμφαλῷ αὐτοῦ · τὸ δὲ ἕτερον, εἰς τὸ ἰσχύον · τὸ δὲ ἕτερον, [407v] εἰς τὴν ἕδραν · εἰ δὲ μηδὲν ἀνύσει ταῦτα, πρόσταξον καὶ τὸν λεγόμενον ἐνετῆρα προκλυζομένων τούτων τῶν ἐντέρων, οἰνομέλιτι, ἢ ὕδατι θαλασσίῳ · ἢ τὸν ζωμὸν τῶν ἐλαιῶν · δέχεται δὲ καὶ ὁ ἐνετὴρ ταῦτα · ὀρύζην · φακήν · κονδίτην · ταυροκόλλαν · οἶνον · ἵνα ἀποτριτωθῶσιν εἰς τὸν ζωμὸν τοῦτον · διϋλισθέντα εἰς πανίον · εἶθ᾽ οὕτως ἐπίβαλε βῶλον · ἄμυλον ψιμμίθιον · ὄπιον · λιθάργυρον · καὶ τὸν κατωτερικὸν τροχίσκον · καὶ ἐξ αὐτοῦ ἰάτρευε κλυστῆρι · πρόσταξον δὲ καὶ κοκκία ἑσπέρα λαμβάνειν, ὅπερ ἐπιδέχεται χυλὸν ὑποκυστίδος καὶ ὄπιον · καὶ κικίδιν · καὶ βαλαύστιαν ἢ ε΄ · καὶ ἐκ τῶν ἄλλων στυπτικῶν · καὶ ἐπίθεμα ἐκ τῶν μελιλώτων · οἳ τὸ ἧπαρ ἔχουσιν ἄτονον · ὅπερ ἐπιδέχεται μελίλωτα κρόκον ἐρυθρόν · φοινίκια πατητά · ῥόδα ἐρυθρά · κρόκους ᾠῶν καὶ οἶνον · ἔστι δὲ ἀναγκαῖον κατάπλασμα εἴς τε κοιλιακὰ καὶ δυσεντερικὰ καὶ αἱμοπτοϊκὰ · τὰ διὰ τῶν ὀπωρῶν, ὅπερ καλοῦσι μακτόν · ἔστὶ δὲ τοῦτο, ἀπὸ μήλων ἀγρίων · μεσπίλων κικίδων κρανίων ·

ξυλοκεράτων · οὔβων. βάτων · λαγινίδων · σιδίων βαλαυστίων · μυρσίνης · βατορίζων · μαστίχης. ἀλόης · παξιμάδος · οἴνου αὐστηροῦ · σιτίνου ἢ κριθίνου ἀλεύρου. προεγράφη δὲ περὶ τῶν τροφῶν τῶν κοιλιακῶν · καλὸν δέ ἐστι καὶ ἀπὸ τῶν λαχάνων λαμβάνειν τὴν ἀνδράχνην μετὰ ὄξους καὶ ἐκπίεσμα τὸν ζωμόν, φρύξον ὀλίγον τὸ ἄλευρον πυρὶ εἰς πήγανον · ἔπειτα ἐκβαλὼν ἐκ τοῦ πυρὸς ζεμάτισον · καὶ ἕψει ἕως παχυνθῇ ὀλίγον · καὶ ἁπλώσας εἰς πανίον, ἐπιτίθει τῇ γαστρὶ · ἀπὸ ὀμφαλοῦ μέχρι καὶ αἰδοίων.

13. Vaticanus graecus *299, ff. 420v, l. 23–421r, l. 8*

ϡπθ΄ πρόσταξις πρὸs κλάσματα στεφάνου ἰατροῦ καὶ ἀκτουαρίου τῶν μαγγάνων · οἰνέλαιον · ἤτοι οἴνου ἐλαίου καὶ ἅλατος · βράσον εἰς τήγανον · καὶ μετὰ ἐρίου ἁπλύτου, πυρίαζε κατὰ τοῦ κλάσματος καλῶς · εἶτα μετὰ τὸ πυριᾶσαι, ἐπιδέσμει τοῦτο μετὰ ῥάκους · καὶ εἰ μὲν οὖν σὺν τῷ κλάσματι, καὶ τῆς σαρκὸς ἐκτομὴ γένηται · ἢ φλύκταινα · ἢ κοίλωσις · ἢ ὄγκωσις · ἢ θλάσμα ὀστοῦ, ποίει οὕτως · πρὸs μὲν τὴν ἐκτομήν, μὴ τίθει τὸν χυλόν · διὰ τὴν τοῦ οἰνελαίου ὑγρότητα · ἵνα μὴ γένηται κόλλησις · ἀλλὰ λευκὰ ᾠῶν · μετὰ δὲ τὸν [421r] οἶνον ὀλιγωστόν · δεῖ καὶ τὸν ὀδυνώμενον ἐπιτηδείως ἀνακλίνειν · ἵνα μὴ κενούμενος ἐντεῦθεν ἢ ἐκεῖσε, ἠμύειν τὰ νεῦρα τόπον ἐκ τόπου μεταλαμβάνειν, ἤτοι μεταβαίνειν, καὶ παρὰ σχῆμα τὸ κάταγμα γίνεται, καὶ τῷ ἰατρῷ μομφὴ ἐπιφέρεται · προσέχειν δὲ καὶ τοῦτο, μή πως καὶ πλῆξις ἔσωθεν τοῦ δέρματος γένηται · καὶ τὸ ἕλκος χρονίσαν, κολπώσεις καὶ σήψεις ἐργάσηται · ποίει δὲ ἐπὶ τοῦτον ἀναστομώματα καὶ ἀναμοτώματα καὶ τὰ πρὸς ἐπιφάνειαν πάντα ἐπιφέρειν · καὶ τὸ ἕλκος φανερὸν ἔστω · διὰ τῶν οὐλωτήρων ἀλειμμάτων θεραπεύομεν θέου εὐδοκοῦντος.

14. Vaticanus graecus *299, f. 422v, ll. 15–29*

αθ΄ εἰς φλεγμονὴν χειρὸς φλεβοτομηθείσης ἐκ τοῦ ξενῶνος, καθὼς ἐδιδάχθημεν · λινοσπέρμου λελειωμένου μέρος α΄ · κριθίνου ἀλεύρου μέρη β΄ · χοιρείου στέατος ἀπάστου τὸ ἀρκοῦν · ῥοδίνου ἐλαίου · βάτου φύλλων · ἀρνογλώσσου πολυγόνου · στρύχνου λειωθέντα, πρότερον δὲ τό τε λινόσπερμον κεκκομένον καὶ τὸ κρίθινον ἄλευρον ἐνωθέντα σὺν χοιρείῳ στέατι καὶ ὕδατι, οὕτω ἐπιβάλλειν τὰ λοιπὰ σὺν τῷ ῥοδίνῳ ἐλαίῳ καὶ μετὰ τὸ ἑψηθῆναι, ἐνώσας τοῖς κρόκοις τῶν ᾠῶν · εἶθ᾽ οὕτως ἐφαπλοῦν καὶ κατὰ τῆς φλεγμονῆς ἐπιτιθέναι · ἀλλάσσων καθ᾽ ἑκάστην ἡμέραν δεύτερον · ἕως ἀφλέγμαντος γένηται · εἰ δὲ καὶ πολλάκις κόλπωσις γένηται, δεῖ ἀναστομοῦν καὶ ἀναμόττειν καὶ ἐκ τῶν ἐμπλάστρων τῶν ἀποκρουστικῶν · ἐπιτιθέναι τήν τε ἀνετὴν καὶ τὴν μνασαίου καὶ διὰ μέλιτος καὶ διὰ μοταρίων ἤ ξαντοῦ καὶ τὴν τετραφάρμακον · διὰ δὲ τὰς φλεγμονὰς προστάττειν ἀπέχεσθαι οἴνου · λαμβάνειν δὲ χυλάριον · ἢ χυλὸν κρίθινον · ἕως ἀφλέγμαντος γένηται · ἔστι δὲ ἐπὶ τούτοις καὶ τὸ ψιττάκιον καὶ ἔμπλαστρον καλόν ·

4. The *xenôn* remedies of Michael Aktouarios in manuscript *Parisinus graecus* 2194

Six passages in manuscript *Parisinus graecus* 2194 are attributed to the *aktouarios* τοῦ μαυραγάνου whose name is given as Michael in passages 4 and 6. These passages, which are dispersed throughout the text entitled δυναμερὸν ξενωνικὸν διὰ πείρας (identified as *Xenonika I*), are discussed in chapter 7.

1. Parisinus graecus *2194, f. 446v, ll. 16–20*

νδ΄ λειχηνικόν · σκευασία παρὰ τοῦ μαυραγάνου ὀκταρίου λαπάθου τοῦ φλοιοῦ τῆς ῥίζης στάγια δ΄ · λιβανωτὸν στάγια β΄ · χαλκίτεως ὠμῆς στάγια δ΄ · μίσυος ὠμῆς στάγια δ΄ · σμύρνης στάγια δ΄ · κομμιδίου στάγια ε΄ · ῥέου στάγια γ΄ · λειχήνων τῆς ἀπὸ τῶν πετρῶν ὡσαύτως · ἀλκυονίου ὁμοίως · πυρέθρου ὁμοίως · ἀμμωνιακοῦ οὐγγίαν α΄ · πάντα ἑνωθήτω, μετὰ ὄξους δριμέος · τοῦτο τὸ λειχηνικὸν ἐνηργησθὲν εἰς τριετῆ λειχῆνα ·

2. Parisinus graecus *2194, f. 446v, ll. 20–21*

νε΄ ἕτερον τοῦ αὐτοῦ λειχηνικὸν δόκιμον: θείου ἀπύρου στάγιον α΄ · ἑλλεβόρου στάγια ε΄ ἥμισυ · δαφνελαίου ὁμοίως · νίτρου στάγιον α΄.

3. Parisinus graecus *2194, f. 446v, ll. 21–25*

νς΄ πεσσὸς πρὸs ἐμπνευμάτωσιν καὶ σκληρίας χρονίας τραχήλου τῆs μήτρας · συντεθεὶς παρὰ τοῦ Μαυραγάνου ὀκταρίου · χαλβανὴς στάγιον · βδελλίου στάγια γ΄ · σμύρνης ὡσαύτως · λιβάνου ὁμοίως · κασίας στάγια δ΄ · ἴρεως ὡσαύτως · καστορίου στάγιον ἥμισυ · ὀπίου στάγια α΄ ς΄ · λείου, ἐπιβάλλων ἐψήματος καταβραχὺ ὅσον ἐξαρχῆς εἰς τὸ γένεσθαι λειότατον · καὶ ἔχειν σύστασιν παχέος ὡς μέλιτος · εἶτα ἐπίβαλλε τετηκότος ὑσσώπου στάγια ς΄ · μυελοῦ ἐλαφίου ὡσαύτως · στέατος χηνείου ὡσαύτως.

4. Parisinus graecus *2194, f. 446v, l. 29–447r, l. 4*

νθ΄ σκευασία ἐμπλάστρου · συντεθέντος παρὰ Μιχαὴλ ἀκτουαρίου τοῦ Μαυραγάνου · πρὸς ψυχρὰς διαθέσεις γαστρὸς καὶ ἥπατος · ψιλάς τε καὶ ὕλης ἐπιρρύτου γινομένου · καὶ πρὸς μητρικὰς ὁμοίως διαθέσεις · καὶ ἁπλῶς πρὸς ἀτονίας σπλάγχνων, ἐπ' ἐνδήμου θερμασίας · ἐπί τε ἀναλήψεσι νοσημάτων · ἐπί τε ἡλικίαις ψυχροτέραις · ἐπί τε χώραις βοριωτέραις · καὶ ἁπλῶς ἐπὶ παντὶ σπλάγχνῳ ἢ ἀπεπτοῦντι τελείως, ἢ βραδὺ πεττοῦντι · καὶ διὰ σύμφυτον δυσκρασίας · ἢ δι' ἐπίκτητον · ἔστι δὲ τὸ φάρμακον, εὐκάρδιον λαδάνου καθαρωτάτου β΄ καὶ ἥμισυ · κηρίον καθαρώτατον · οὐγγίας ς΄· στύρακος καλαμίτου ἀκράτου, οὐγγίας ε΄ · μαστίχης καθαρᾶς οὐγγίας΄ · τερεβίνθης οὐγγίας ε΄ · πέπερι στάγια γ΄ · στάχυος ὁμοίως · κιναμώμου ὁμοίως · ξυλαλόης ἰνδικῆς οὐγγίαν α΄ καὶ ἥμισυ · ἄμπαρ ὁμοίως · βαλσαμελαίου στάγια γ΄. ταῦτα δὲ εἰς ἐλαίου γ΄ ἐμβαλλόμενος [—-]νει τοῦ κηροῦ · καὶ οἶνον α΄ ποίησον ἀλείφειν · δέον δὲ τὴν σύνθεσιν ἐν διπλώματι ἔψει ἕως οὗ ἀναλυθῇ ὁ οἶνος.

5. Parisinus graecus *2194, f. 447r, ll. 20–23*

ξθ΄ ἕτερον κηράλειμμα τοῦ Μαυραγάνου πρὸς πανάδας κρινόριζον · ἀμμωνιακόν · ἀξούγγιν τράγιον · πρὸς ὀλίγα ταῦτα · κηρὸν τρακτόν · ἕνωσον μετὰ ἀμυγδαλέων · καὶ οἴνου ἄσπρου αὐστηροῦ ἀκράτου, καὶ βράσας καλῶς, σακέλισον ταῦτα, μετὰ ἀρεοῦ πανίου · καὶ τὸ σακελισθὲν ἑνώσας μετὰ ὑδραργύρου καὶ τῶν λειπῶν γνωρισμάτων εἰδῶν, ποίησον κηράλειμμα.

6. Parisinus graecus *2194, f. 447v, ll. 19–24*

ος΄ κουκούμιον συντεθὲν παρὰ τοῦ ὀκταρίου Μιχαὴλ τούτου Μαυραγάνου εἰς τὴν δέσποιναν κυρὰν Ξένην μητρικόν · ξυλαλόης στάγια δ΄ · σχίνου ἄνθους · κιναμώμου · ἀμώμου · ξυλοβαλσάμου · κασίας · μυρσινοφύλλων · κυπαρίσσου · ῥόδου ἀνθῶν · στάχυος · τριψίδου · λαπάθου σπέρματος · ῥόδων αἰγυπτίων ἄνθους στάγια δ΄ · κυπαρισικίων στάγια β΄ · κιτρεόφυλλα · κιτρίου ἀρωματικοῦ · νιτροκόκκου · ἐκκαθαρισμίου κόστου· μάκιρ · κίννας ἀτρίπτου · ἐρείκης καρποῦ ἄνθους στάγια β΄ · δενδρολιβάνου στύψεως.

5. The *Therapeutikai*

On the basis of available printed catalogues of manuscript collections, the text of the θεραπευτικαὶ ἰατρεῖαι discussed in chapter 4 seems to be contained in the following ten manuscripts whose period of copy ranges between the thirteenth and sixteenth centuries. They are divided here in three groups:

Florentinus Laurentianus 7, 19 (13th/14th cent.), ff. 202r–209r
Vindobonensis medicus graecus 32 (16th cent.), ff. 120v–125v
Monacensis graecus 105 (16th cent.), ff. 326v–333v

Parisinus graecus 2229 (13th cent.), ff. 70r–74r
Parisinus supplementum graecum 764 (16th cent.), ff. 84r–88v
Athous Iviron 151 (15th cent.), ff. 218r–223v
Parisinus graecus 1091 (15th cent.), ff. 77r–86r
Oxoniensis Baroccianus 150 (15th cent.), ff. 29v–32v
Atheniensis 1499 (16th cent.), ff. 186v–173r [*sic*][2]

Parisinus graecus 2236 (15th cent.), ff. 54v–60r

Although other manuscripts might come to light in the future, some elements for a *stemma codicum* can already be identified. The *Laurentianus*, the *Vindobonensis* and the *Monacensis* (that is, the first group above) are grouped together because they disclose on comparison a common origin and some unique readings. The *Parisinus graecus* 2236 stands alone as its lexicon contains mediaeval (viz., Byzantine) terms, either in the body of the text or as superscript glosses.

The *Laurentianus*, the *Monacensis*, the *Parisinus supplementum graecum* 764, the *Parisinus graecus* 2091, the *Baroccianus* 150 and the *Atheniensis* (which form the second group above) contain sixty-seven chapters, as does also the *Vindobonensis* 32 (in the first group), which contains, however, supplementary chapters not found in the other manuscripts. The *Parisinus graecus* 2229 contains the text up to chapter 57. The *Iviron* and the *Parisinus graecus* 2236 contain seventy chapters.

The length chapters that make the *Therapeutikai* varies from a line (chapters 17, 36 and 63 for example) of even less (half a line, chapter 65) to some twenty lines (chapter 60 for instance). The short chapters are reproduced in full below (nos. 2, 3, 4, 5, 7, 8, 9, 10, 13, 16, 17, 20, 22, 24, 25, 26, 29, 30, 32, 36, 39, 40, 41, 42, 43, 45, 46, 51, 52, 53, 54, 56, 59, 61, 62, 63, 64, 65, 66, 68, 69, 700), whereas only the *incipit* and the *desinit* is provided for the longer chapters (nos. 1, 6, 11, 12, 14, 15, 18, 19, 21, 23, 27, 28, 31, 33, 34, 35, 37, 38, 44, 47, 48, 49, 50, 55, 57, 58, 60, 67). Whatever the length, the text below is based on the consensus of the *Laurentianus*, the *Monacensis* and the *Vindobonensis*.

The following passages witnessed by one manuscript only are not included below:

Vindobonensis medicus graecus 32: ff. 125r, l. 8–125v, l. 21, and 125v, l. 27–127v, l. 8;
Parisinus graecus 2229: ff. 70v, l. 18; 71r, ll. 2–4; 71r, ll. 12–13; 71r, ll. 23–26; 71v, ll. 29–32; 72v, ll. 9–27; 73r, ll. 5–6; 73r, ll. 10–11; 73r, ll. 25–33; 73v, ll. 1–5; 73v, ll. 22–24;
Parisinus supplementum graecum 674: ff. 86v, ll. 20–30 (including a paragraph on bone fractures) and 87r, ll. 25–30;
Atheniensis 1499: ff. 171r, ll. 16–18;
Parisinus graecus 2236: f. 54v, ll. 17–19.

θεραπευτικαὶ ἰατρεῖαι συντεθεῖσαι παρὰ διαφόρων ἰατρῶν κατὰ τὴν ἐκτεθεῖσαν ἀκολουθίαν τοῦ ξενῶνος.

1. πρὸς ὀξὺν πόνον κεφαλῆς

Inc.: κισσὸν ξηράνας ἢ καὶ χλωρὸν κοπανίσας ἀπόβρεχε εἰς ἔλαιον, ὀθονίῳ δὲ διηθήσας, χρίε τὸ μέτωπον καὶ τοὺς κροτάφους . . .

Des.: . . . εἰς ἀγρυπνοῦντας, χυλὸν μανδραγόρας μετὰ λιβάνου καὶ ὄξους ἀναλαβὼν χρῶ. ἄλλο. μαρουλίου σπέρμα καὶ χοῦν χελιδονοφώλου τρίψας μετὰ κροκοῦ ᾠοῦ, ἐπίχριε τῷ μετώπῳ.

2. πρὸς ἡμίκρανον

λαβὼν ἄσβεστον ζῶσαν, λειώσας μετὰ μέλιτος, χρίε τὸν κρόταφον. ἄλλο. θεῖον, καὶ σκότος, καὶ πέπερι λευκόν, καὶ κάρδαμον, πάντα ἴσα κόψας, λείωσον μετὰ ὄξους, καὶ χρίε ἀπὸ κροτάφου εἰς κρόταφον.

3. πρὸς πόνον κεφαλῆς καὶ ἡμικρανίου

κάρδαμον, ὄξει, καὶ ῥοδίνῳ ἐλαίῳ φυράσας, καὶ ποιήσας πάχος κηρωτῆς κατάχριε. ἄλλο. σκορπίουρον καὶ λίβανον κοπανίσας σὺν ὄξει, ἀναλαβὼν χρίε τὸ μέτωπον καὶ τοὺς κροτάφους.

4. εἰς ζέσιν κεφαλῆς

ῥόδινον σὺν ὄξει χλιάνας χρίε καθόλου τὴν κεφαλήν. ἄλλο. ζάμβακον ὁμοίως καὶ ἔλαιον ὁμοίως.

5. ἀπόζεμα σκοτωματικὸν

ἄνηθον, ὕσσωπον, καὶ στοιχάδα μετὰ ὕδατος ἑψήσας δίδου πίνειν, τὴν δὲ χύτραν ἐν τῇ ἑψήσει πώμασον. ἄλλο. βαλὼν ἀνηθόξυλον ἐν χύτρᾳ καὶ μέλι ὀλίγον μετὰ ὕδατος ἕψησον, καὶ δίδου πίνειν ὀψὲ καὶ πρωΐ.

6. κεφαλικὸν περίχυμα

Inc.: βαλὼν εἰς χύτραν οἶνον παλαιόν, μυρσίνην, δενδρολίβανον . . .

Des.: . . . θερμάνας τὸ περίχυμα, περίχυσον τὴν κεφαλήν. εἰ δὲ οὐ βούλεται λούσασθαι, τὰ ξηρία ἐπίπασσε τὴν κεφαλήν.

7. ὀφθαλμικόν

ᾠὸν ἐκζέσας, κοπάνισον τὸν κρόκον, καὶ κρόκον ἀληθινόν, ῥοδόσταγμα, καὶ ἔψημα προσβαλών, συμφύτου καὶ ἀμαράντου χυλόν, καὶ βάψας βαμβάκιον ἐπίθες ἐπὶ τοὺs ὀφθαλμούς, καὶ ὅπου ἄν γένηται πυρώδης φλεγμονή.

8. εἰς τράχωμα ὀφθαλμοῦ

βαλὼν ἀμμωνιακὸν εἰς ὕδωρ τοῦ ἀέρος, καὶ ἀποβρέξας λεάνας αὐτὸ βάλε εἰς τοὺς ὀφθαλμούς.

9. ὅταν κνήθεταί τις τοὺς ὀφθαλμούς

ῥοίδιον, ὄξινον τὸ λέπος αὐτοῦ φρύξας καὶ κοπανίσας μετὰ οἴνου, ἀναλαβὼν χρίε τοὺς ὀφθαλμοὺς ἐπάνω, καὶ ἐπιδεσμεῖ παννίον.

10. εἰς ῥευματιζομένους ὀφθαλμούς

λίβανον, μαστίχην, σμύρναν, φάβα ἀλεστὸν κοπανίσας μετὰ τὸ λεπτὸν τοῦ ᾠοῦ, ἐπίχριε τὸ μέτωπον, τιθεὶς ἐπάνω στυππεῖον.

11. εἰς αἱμορραγίαν ῥώθωνος

Inc.: ᾠοῦ λέπος καύσας καὶ τρίψας, βαλὼν εἰς καλάμον ἐμφύσησον τῇ ῥινί . . .

Des.: . . . ἡδύοσμον χλωρὸν λειώσας σὺν ὄξει, ἔμβαλλε εἰς τὴν ῥῖνα πήγανον χλωρὸν σὺν ἐλαίῳ λειώσας, ποίει ὁμοίως.

12. εἰς ξηράδα ῥώθωνος

Inc.: βάμβακα ἄλειφε ἔσωθεν τῆς ῥινός . . .

Des.: . . . ἱστὸν ἀράχνης μετὰ ἐλαίου ἀποζυμώσας ἐπιτίθει. κικίδιον τρίψας, ἐπίπασσε, καὶ τίθει σάρκα τομαρίου.

13. στοματικὰ ὅτε ἀπὸ πυρακτώσεως βλαβῇ τὸ στόμα

κοπανίσας ῥοδόμελι, καὶ βαλὼν ῥοδόσταγμα συγκοπάνισον, καὶ διυλίσας αὐτὸ ἐν παννίῳ, καὶ ἀποπιάσας. καὶ χλιάνας, δίδου κλύζειν τὸ στόμα ἵνα ἐγκρατῇ αὐτό.

14. εἰς βρωτῆρα στόματος καὶ καθόλου τοῦ σώματος

Inc.: ἀριστολοχίας λειώσας μετὰ μέλιτος, ἄλειφε τὰ οὔλη, πρόκλυζε δὲ τὸ στόμα εὐκράτῳ . . .

Des.: . . . ἀναλάμβανε μετὰ μέλιτος, καὶ ποιήσας ἄλειμμα, κατάχριε τὸν τόπον, καὶ εὐθέως παύει.

15. ὀδοντότριμμα

Inc.: μυρσίνην, δενδρολίβανον, δαφνόφυλλα, καρπήν, πάντα ἐψήσας . . .

Des.: . . . καὶ ἐν καιρῷ τῆς χρεῖας πρόκλυζε τὸ στόμα οἴνῳ, καὶ ἐπίπασσε ἐκ τοῦ ξηρίου τὰ οὔλη καὶ τοὺς ὀδόντας.

16. πρὸς αἷμα πτύοντα

ἡδυόσμου χυλὸν πότιζε μετ᾽ ὄξους, ἢ ἀρνογλώσσου χυλόν, ἢ πολυγόνου χυλὸν ὁμοίως.

17. εἰς πόνον γλώσσης

ἐλαίας φύλλον μασοῦ καὶ ἐπικρατεῖ εἰς τὴν γλῶσσαν.

18. ἐπίθεμα χαλαστικὸν ἐὰν οὐ ποιεῖ ἡ κοιλία

Inc.: ἀλθαίαν, χαμαίμηλα, καλάμινθον, ἀψίνθιον, λινόσπερμα, πάντα κοπανίσας . . .

Des.: . . . ἑψήσας καλῶς, καὶ καταπλάσας τὸ σπλάγχνον, ἐπίθες ἐπάνω στυππεῖον, καὶ παννίον καὶ δῆσον.

19. κοιλιακά

Inc.: κοπανίσας μαστίχην, κόστον, γλίχωνα, κοκκόδαφνα, ἀναλάμβανε αὐτὰ κροκὰ ᾠῶν . . .

Des.: . . . εἰς δὲ τὰς τροφὰς τῶν κοιλιακῶ ὀρύζην, πίστον, σεμίδαλιν, φάβα, φακήν. ᾠὰ ἑψημένα μετὰ ὄξους.

20. εἰς σκληρίαν σπλάγχνων

ἀρτόμελι ἑψήσας, καὶ ἐφαπλώσας ἐν παννίῳ κατάπλασσε. ἄλλο. λινόσπερμα κοπανίσας, καὶ κριθάλευρον ἑψήσον μετὰ ἑψήματος, κατάπλασσε τὸ σπλάγχνον. τὸ αὐτὸ καὶ εἰς πᾶσαν σκληρίαν.

21. ἡπατικὰ καὶ πλευριτικά

Inc.: ἀμύγδαλα πικρά, κόστον, κινάμωμον κοπανίσας, τοὺς μὲν πυρέσσοντας πότιζε . . .

Des.: . . . ἄλλο. ἀψίνθιον ἀποβρέξας εἰς οἰνόμελι, καὶ ἑψήσας πότιζε. ἡπατικοὺς καὶ στομαχικοὺς ὠφελεῖ δὲ καὶ εἰς τὰ ῥίγη.

22. πρὸς ἧπαρ

σελίνου ῥίζας τρεῖς, λειώσας μετὰ σκόρδου, δὸς πίνειν μετὰ οἴνου καλοῦ, ὁμοίως καὶ πρὸς δυσουριῶντας.

23. σακέλλοι ἐπὶ τῶν πλευριτικῶν

Inc.: κριθάριν, κέγχρον, δαφνόφυλλα, ἅλας, γλίχωνα βαλὼν εἰς χύτραν καταξηράνας . . .

Des.: . . . ἄμμον ἀπὸ ποταμοῦ ὁμοίως πυρίαζε κατὰ μόνας, χονδρὴ δὲ ἔστω ἡ ἄμμος, μὴ ἔστι χῶμα.

24. ἡπατικόν

κοπανίσας κραμβόφυλλα, καὶ προσμίξας μέλι, ἔψησον καλῶς ἕως οὗ δέξεται πάχος, καὶ ἁπλώσας αὐτὸ ἐν παννίῳ, κατάπλασσε τὸ ἦπαρ.

25. εἰς πόνον στομάχου

βαλὼν βλισκούνιν εἰς χύτραν καὶ οἶνον παλαιὸν ἑψήσας καλῶς μετὰ σπόγγοις δύο, ἕνα παὰ ἕνα πυρίαζε τὸν στόμαχον.

26. ἔμπλαστρον ἤτοι ἐπίθεμα εἰς πόνον στομάχου καὶ πρὸς πάντα τὰ ἐκ τοῦ στομάχου γινόμενα νοσήματα

καλαμίνθην πεφρυγμένην, γλήχωνα, ἄγνου σπέρμα, δαφνόκοκκα, λινόσπερμα σάμψουχον, τῆλιν, ὀρίγανον, κριθάλευρον, ἀμφότερα ρίψας, καὶ κοσκινίσας, βάλε εἰς οἶνον, μέλι, βούτυρον, δαφνέλαιον χαμαιμηλέλαιον. ἀμφότερα τρίψας ἐπίθες.

27. σπληνικά

Inc.: βαλὼν ἀρσενικόν, λίβανον, κράμβης φύλλα ἐκνενησμένα, τρίψας πάντα καὶ ἐπιθείς . . .

Des.: . . . ποίησον κοκκία καὶ δίδου καταπίνειν, καὶ κεῖσθαι ἐπὶ τὸν σπλῆνα.

28. ἐπίθεμα σπληνικόν

Inc.: κριθάλευρον μετὰ ὄξους ἑψήσας, καὶ ποιήσας ὡς κόλλαν κατάπλασσε . . .

Des.: . . . μετὰ τοῦτο πρόσβαλε κριθάλευρον, καὶ πάλιν ἑψήσας κατάπλασσε.

29. περὶ χρισμάτων

ἀποβρέξας ἀμμωνιακὸν καὶ λίβανον εἰς ὄξος κοπανίσας, καὶ ἀναλαβὼν περίχρισον τὸν σπλῆνα τιθεὶς ἐπάνω στυππεῖον.

30. εἰς πάντα πόνον τῶν ἐντός, καὶ εἰς φαρμάκωμα

ζάμβακα μετὰ εὐκράτου συνταράξας πότιζε. ἄλλο. λεπτοκάρυα τρίψας μετὰ εὐκράτου πότιζε. ἄλλο. πηγάνου σπέρμα καθώς ἐστι μετὰ τοῦ ἐνδύματος αὐτοῦ τρίψας μετὰ εὐκράτου πότιζε.

31. νεφριτικά

Inc.: σατύριον κοπανίσας μετὰ οἴνου ἀναλαβών, θερμάνας ἐν λουτρῷ, πότιζε, ἢ καὶ δίχα λουτροῦ . . .

Des.: . . . ὁμοίως πότιζε ἐν λουτρῷ, καὶ τὴν ζηνόφυλλον εὕρὼν πότιζε.

32. πυρία νεφριτική

ζεματίσας πίτυρα καὶ βλισκούνιν, καὶ ἀποπιάσας μετὰ παννίου, πυρίαζε τὸν τόπον.

33. διουρητικά

Inc.: ἄγρωστιν τὴν ῥίζαν αὐτῆς πλύνας, καὶ ἑψήσας μετὰ ὕδατος πότιζε . . .

Des.: . . . καὶ ἐπάλειψον τὴν κύστιν, καὶ βαλὼν τὰ ἐπίλοιπα ἐν μαλλῷ, ἐπίθες ἐπάνω τῆς κύστεως καὶ φασκίωσον.

34. ἰσχιαδικὸν ἔνεμα

Inc.: θλάσπιν, κενταύριον, χαμαίμηλα, ἀνηθόξυλα, ἀγριοσυκῆς ῥίζαν, τῆλιν, πίτυρα, πάντα ἑψήσας καλῶς . . .

Des.: … δαφνέλαιον θερμάνας ἄλειφε καὶ ἐπίθες, βαλὼν ἐπάνω πηγανέλαιον. ὁμοίως ὠφελεῖ καὶ εἰς πάντα πόνον.

35. εἰς τὰ ἀναγκαῖα ὅταν πρισθῶσιν

Inc.: ἑψήσας φακὴν μετὰ ὕδατος καὶ ὄξους δριμέου ἕως χυλωθῇ καλῶς, καὶ κοπανίσας αὐτὰ ἐφάπλωσον ἐν παννίῳ . . .

Des.: . . . ἐὰν δὲ γένηται πυράκτωσις καὶ τραυματισμὸς ποίησον ἄλειμμα, λιθάργυρον μετὰ ὄξους, ἢ τὸν κρόκον τοῦ ᾠοῦ ἔκζεστον καθὼς ἀνωτέρω εἴρηται.

36. εἰς τὸ μόριον ἐὰν γένηται πληγὴ ἐπάνω

τὸ ἄλειμμα τῆς λιθαργύρου ποίησον μετὰ ὄξους καὶ θὲς εἰς τὸν τόπον καὶ ὑγιαίνει.

37. εἰς σκληρίας παντοίας

Inc.: βαλὼν κριθάλευρον καὶ ῥητίνην ξηρὰν τετριμμένην, ἕψησον μετὰ οἴνου εἰς τρούλλην . . .

Des.: . . . ἄλλο. ζυμάριν καὶ μέλι ἀναζυμώσας ἐπίθες.

38. ἐκσυρτικόν

Inc.: ῥητίνην ξηρὰν κοπανίσας καὶ ζεματίσας καὶ μαλάξας, ἐπίθες ἐπιδήσας παννίῳ . . .

Des.: . . . μαλάξας ἐπὶ τῆς χρείας ἐφάπλωσον ἐν παννίῳ, καὶ ἐπίθες. τὸ ὄνομα τοῦ ἐμπλάστρου τῆς ἁγίας Ζηναίδος ἐστίν.

39. ἄλειμμα τραυματικόν

κηρόν, ῥητίνην, χαλβάνην, ἀμμωνιακόν, τερεβινθίνην ἔλαιον, ἀξούγγιον ὀρνίθειον καὶ χήνειον, μυελὸν ἐλάφου, σμύρνην, λίβανον, μαστίχην. πάντα κοπανίσας, καὶ ἐπαναλύσας τὰ ἀξούγγια μετὰ τοῦ ἐλαίου καὶ τοῦ κηροῦ, πρόσβαλλε τὰ ξηρία καὶ ἑψήσας, ποίησον ἄλειμμα καὶ χρῶ.

40. ἄλειμμα θεραπευτικόν

τερεβίνθην, οὐγγία α΄, λίβανον οὐγγία α΄, μαστίχην οὐγγία α΄, ῥητίνην οὐγγία α΄, μέλι οὐγγία α΄, κηρὸν οὐγγία α΄, ἀξούγγιον τράγου οὐγγία α΄.

41. εἰς ὑπερσάρκωμα

σπόγγον ἄθικτον ξηρὸν ἐπίθες ἐπάνω τοῦ ὑπερσαρκώματος, καὶ μετὰ παννίου ἐπίδησον. ἄλλο. ἰάριν ἐπιπάσας μετὰ παννίου ἐπίδησον, καὶ χαλκίτην ὁμοίως, ἢ μυρσίνην ὁμοίως. ἐὰν δέ ἐστι σὰρξ καὶ κάτω ἔχουσα ῥυπαρίαν, καὶ οὐκ ἀναστήσῃ, ποιήσας εὐκρατόμελι μετὰ ξανθίων, παννία βάψας, ἐπίθες. ἢ ὀρόβιν κοπανίσας, μετὰ μέλιτος ἀναλαβὼν ἐπίθες.

42. πρὸς τὸ ἀναβιβᾶσαι τὴν σάρκα

ῥητίνην ξηρὰν ἐπίπασον ἢ ξηράνας παννίον ψιλόν, λινὸν ἀναγόμωσον τὴν πληγήν.

43. εἰς αἱμορραγίαν

χαλκίτην κοπανίσας ἐπίθες ἢ ἀλόην κοπανίσας, ποίησον ὁμοίως. ἄλλο. ἀρσενικὴν βαλών, ποίησον ὁμοίως, ἢ στυπτηρίαν σχιστὴν ὁμοίως. ἄλλο. καλαμίνθην ὁμοίως, ἢ ἴδια ἕκαστος ἢ πάντα ὁμοῦ λειώσας, καὶ ἑνώσας ποίησον ξηρίον, καὶ ἐπὶ τῆς χρείας ἔχε καὶ χρῶ.

44. εἰς πρῆσμα ποδῶν

Inc.: ποιήσας ἅλμην δασεῖαν μετὰ θερμοῦ, ἄντλησον τοὺς πόδας, κόψον δὲ καὶ τοὺς ὄνυχας . . .

Des.: . . . δῆσον μετὰ παννίου. ὑπανοίγει γὰρ τοὺς πόρους, καὶ διὰ τῶν ἀδήλων πόρων ἐξέρχεται ἡ ὕλη.

45. εἰς ποδαλγίαν

ποίησον οἰνόκολλον, καὶ ἁπλώσας ἐν παννίῳ ἐπίχυσον ἐπάνω κρόκον ᾠοῦ, καὶ ἐφαπλώσας ἐπίθες. ἄλλο. κριθάλευρον μετὰ ὄξους ἑψήσας ἐπίθες. ἄλλο. πελαργὸν

ἐψήσας σύμπτερον, ἐκ τοῦ ἀφεψήματος τὸ ἔλαιον αὐτοῦ σώρευσον, καὶ ἐπάλειφε ἐξ αὐτοῦ τοὺς πόδας καὶ τὰς χεῖρας, ἢ βρύα θαλάσσης ἐπίθες.

46. εἰς πώρωμα

κοπανίσας πιτύκιν καὶ προβρέξας τὸν τόπον ὄξει, ἐπίπασσε τὸ πιτύκιν. ἄλλο. ἀλείψας τὸν τόπον μέλιτι ἐπίπασσε τὸ πιτύκιν καὶ θὲς ἐπάνω κραμβόφυλλα, καὶ μετὰ παννίου ἐπίδησον. ἢ προαλείψας τὸν τόπον μέλιτι, ἐπίπασον ἐπάνω ἅλας ψιλόν.

47. εἰς τὰ ῥίγη, λέγω δὴ ἀφ' ἡμερινόν, τριταῖον καὶ τεταρταῖον

Inc.: ῥέον κοπανίσας μετὰ κιναμώμου, καὶ ἀποβρέξας μετὰ οἴνου ὑποδιπλώσας, πότιζε . . .

Des.: . . . ὁμοίως καὶ αἱ λοιπαὶ ἀντίδοτοι. εἰς τὰ κατὰ περιόδους γινόμενα ῥίγη, διδόμενα μεγάλως ὤνησαν.

48. ἐμετικά

Inc.: ἀριστολόχειαν μακρὰν τὸ μέγεθος κονδύλου κατακόψας καὶ κοπανίσας ψιλῶς, ἐπίβαλε εἰς αὐτὴν μέλι κοχλιαρίου τὸ ἥμισυ . . .

Des.: . . . ἀπὸ λουτροῦ ὅτε θέλεις ἐκβεῖν πίε αὐτό, καὶ πλαγίωσον εἰς τὰ σάβανα, καὶ μετὰ ὥραν ἀνεμοῦνται χυμοὶ παχεῖς.

49. εἰς ἐξοχάδας

Inc.: ἀλόην ἐψήσας μετὰ ὕδατος ἐπίχριε, ἢ θηριακὴν ἐπαναλύσας μετὰ ὕδατος, ἐπίχριε ταῦτα καὶ εἰς ἐσοχάδας μετὰ μοταρίου παράπεμπε . . .

Des.: . . . ὁμοίως καὶ εἰς ἀπόκαυμα χειρῶν καὶ ποδῶν ὠφέλιμόν ἐστι τὸ βδελλίσαι. ἄλλο. σατύριον τὸ ἐπίμηκες τρίψας πότιζε μετὰ οἴνου.

50. εἰς ἔκβρασιν καὶ λοιμικήν

Inc.: ὅτε ἄρξηται πότισον αὐτὸν ἅλμην δασεῖαν μετὰ χλιαρου· ἀφ' οὗ δ' ἄρξηται ἐκβάλλειν ἐψήσας φακὴν μετὰ ὕδατος ἕως οὗ χυλωθῇ καλῶς . . .

Des.: . . . ἄλλο. ἔστι βοτάνη ἡ μεγαλόφυλλος, καὶ γίνεται εἰς ποταμούς· ταύτης τὴν ῥίζαν ἀποβρέξας, δίδου πίνειν, καὶ ἐξ αὐτοῦ ἔψεε καὶ τὰ φαία.

51. κοκκία καθαρτικὰ γαληνοῦ

ἀλόην ἐξάγιον ἕν, σκαμώνιον ἐξάγιον ἕν, ἀψινθίου χυλὸν ἐξάγιον ἕν, κολοκυνθίδος ἐξάγιον τὸ ἥμισυ. ἀναλάμβανε ταῦτα μετὰ χυλοῦ κράμβης, καὶ ποίει κοκκία καὶ χρῶ.

52. καθαρτικὸν εἰς ὑδρωπικούς

πετροσελήνου ἑξάγιον ἕν, ἀνίσου ἑξάγια γ΄, ἐπιθύμου ἑξαγία γ΄, χαμελαίας φύλλα δραχμὰς γ΄ καὶ ἥμισυ, μέλιτος τὸ ἀρκοῦν.

53. στήλη εἰς ἀποφλεγματισμόν

βαλὼν γλίχωνα, ὀρίγανον, ἀγριοσταφίδας, δαμάσκηνα ψυκτά, ζίζιφα, ἰσχάδια, σταφίδα, μέλι, ἔψημα, ὄξος, ἑψήσας δίδου ἀποφλεγματίζειν καὶ ἀναγαργαρίζειν.

54. εἰς τὸ ῥέον ὅπερ τινὲς γλυκύ φασιν, ὅπου δ' ἂν ἐκφύῃ

κοπανίσας λιθάργυρον καὶ βαλὼν ῥοδέλαιον καὶ ὄξος ποιήσας ἄλειμμα χρῶ. εἰ δὲ πολλὰ καταστήσει, κοπανίσας μυρσίνην ἐπίπασσε ξηράν· ὁμοίως καὶ κηρομάρμαρον [κατάξηρον].

55. ὠτικά· εἰς ἔμφραξιν ὤτων

Inc.: βαλὼν ἔψημα εἰς ᾧοῦ λέπος θερμάνας, ἐπίχεε εἰς τὸ οὖς, ἢ κοπανίσας κινάμωμον καλόν . . .

Des.: . . . ἄλλο. κοπανίσας νίτρον, καὶ προσβαλὼν βούτυρον, καὶ ἀναμίξας βάλε αὐτὰ εἰς κρομμύδιν ἄσπρον καὶ χλιάνας ἐπίχεε εἰς τὸ οὖς.

56. κιονικὰ ὅταν καταβῇ ἡ σταφυλή

κοπανίσας στυπτηρίαν παράπτου ἢ ἅλας μετ' ὀλίγου πεπέρεως κοπανίσας παράπτου. σκοπεῖν δὲ χρῇ ἵνα μὴ ἔστι φλεγμονή.

57. ἀναγαργαρισμοί

Inc.: πρῶτον μὲν τὸ ὀξύκρατον, μετὰ τοῦτο δὲ τὸ ὑδροροσάτον, τὸ διάμορον . . .

Des.: . . . ἄλλο. βαλὼν βούτυρον καὶ μέλι εἰς ποτήριον, καὶ ἀναλύσας αὐτὸ καὶ θερμάνας δίδου καταπίνειν.

58. βηχικά

Inc.: βαλὼν εἰς τρούλλην ἀνηθέλαιον, πηγανέλαιον χαμαιμηλέλαιον, βούτυρον νευροχαλαστικόν, μαρκίατον, πάντα ἐκθερμάνας . . .

Des.: . . . ἄλλο. χαλβάνην ἕψησας μετὰ οἴνου, δίδου πίνειν. ἄλλο. πράσιον ἑψήσας μετὰ μέλιτος καὶ οἴνου δίδου πίνειν.

59. τὸ ἐκλεικτόν

κουκουνάρια, πιστάκια, ἀμύγδαλα καθαρίσας καὶ κοπανίσας, προσβαλὼν ὕσσωπον, τραγάκανθον, κρόκον ἀληθινόν, μετὰ μέλιτος ἀναλάμβανε, καὶ δίδου

τρώγειν ὀψὲ καὶ πρωΐ. ἄλλο. ὄπιον, στύρακα, σαγάπηνον, χαλβάνην, ἶριν ἐνώσας, καὶ ἀναζυμώσας ποίησον κοκκία, καὶ δίδου καταπίνειν.

60. δυσπνοϊκά

Inc.: λίβανον τρίψας μεθ' ὕδατος καὶ θερμάνας πότιζε· σμύρναν ὁμοίως πότιζε. ἄλλο. ἀφρόνιτρον κεράτια β´ σὺν μελικράτῳ ζέσας καὶ χλιάνας, δὸς πίειν . . .

Des.: . . . καὶ μετὰ τοῦτο βαλών αὐτὸν εἰς ἀγγεῖον γαστρίνον· καῦσον αὐτὸ ἕως οὗ γένηται καρβώνιον, καὶ τρίψας πότιζε μετὰ οἴνου.

61. ἐὰν ῥεύσῃ ἀπὸ κεφαλῆς εἰς χεῖρας ἢ εἰς πόδας ἢ εἰς ἕτερον μέλος

βαλὼν κριθάλευρον, καὶ πίσσαν τριπτὴν ἔψησον μετὰ ὄξους, καὶ ἁπλώσας αὐτὸ ἐν παννίῳ ἐπίθες, καὶ εὐθέως παραμυθεῖται τὸν πόνον.

62. ξηρίον στομαχικὸν πινόμενον μετὰ οἴνου

βαλὼν κύμινον ἄνισον ἐξ ἴσου, σελινόκοκκον τὸ ἥμισυ κοπανίσας λάμβανε ἐπιρροφῶν οἶνον. ἄλλο. ἡδύοσμον ξηρὸν κοπανίσας, μετὰ μέλιτος ἀναλάμβανε, καὶ δίδου ἐκλείχειν.

63. πρὸς τοὺς μὴ κατέχοντας τὴν τροφήν

ἡδύοσμον ξηρὸν κοπανίσας μετὰ οἴνου πότιζε.

64. κεφαλῆς ἀναξηραντικὸν ῥεύματος

κηκίδων, σιδίων, ἀνὰ οὐγγίας β´, ἀριστολοχείας μακρᾶς, σχοίνου ἄνθους, ῥόδων ξηρῶν, μυρσίνης, ἀνὰ οὐγγίαν α´· τρίψας καὶ σείσας χρῶ.

65. εἰς καῦστραν ἐξ ὕδατος θερμοῦ

ᾠοῦ τὸ λευκὸν ἐπιχριόμενον.

66. εἰς κνησμονάς

ὠφελεῖ σταφὶς ἀγρία χριομένη, ἐν βαλανείῳ ἢ ἐν ἡλίῳ, ἢ ῥόδον ξηρὸν καὶ νίτρον, καὶ σταφὶς ἀγρία τρίψας μετὰ ὄξους. χρῶ ἐν βαλανείῳ.

67. ἁλάτιον σκευασθὲν ὑπὸ τοῦ ἁγίου Γρηγορίου τοῦ θεολόγου

Inc.: ἔχον ἐνεργείας τοιάσδε. ὀφθαλμίαν οὐ ποιεῖ ἕως γήρους, οὐκ ὀδόντας ἀλγῆσαι, οὐ βῆξαι, οὐ τρίχας ῥεῦσαι. τὸν νοῦν ὀξύνει . . .

Des.: . . . σιλφίου οὐγγίαι α΄ καὶ ἥμισυ, ἄμεως οὐγγία α΄, ἁλὸς κοινοῦ οὐγγίαι β΄· πεπέρεως οὐγγίαι β΄, φύλλου οὐγγίαι β΄. ταῦτα κόψας καὶ σείσας χρῶ ἐν ἐδέσμασιν οἷς ἂν βούλῃ.

68. περὶ τοῦ μεγάλου ἀποζέματος τοῦ ξενῶνος

στυχάδα, ὀρίγανον, γλήχωνα καὶ καλαμίνθην καὶ ὑπερικόν, ξανθοκάρυα, παιωνίας, ἐλλέβορον, ἀγαρικόν, θύμον καὶ ἐπίθυμον, ἁλύπου φύλλα, καὶ πέπλιον ἐντεριώνην, καὶ ἀσκαμωνίαν, πιτυοῦσσαν, δαμασκηνά, ζίζυφα, ἀδίαντον, κάρυα μυριστικά.

69. τὸ μέγα ἀπόζεμα ’Αθανασίου

ἐντεριώνην πολυποδίου, ἀγαρικόν, ἐπίθυμον, ξανθοκάρυα, ἀσκαμωνίαν, ἀνὰ στάγια β΄, ἀβρότονον, καλαμίνθην, ὀρίγανον, ἀνηθόξυλα, γλήχωνα, παιωνίαν, πέπλιον, καλάμου ἀρωματικοῦ, ἄλυπον, στοιχάδα, μαραθρόξυλον ἀχώριστον, ἀψίνθιον ἀνὰ στάγιον α΄, μέλανα ἑλλέβορον, ξανθὸν ἑλλέβορον ἀνὰ στάγιον α΄, ἰσχάδας δ΄, ξυλοκέρατα δ΄.

70. τῆς πικρᾶς τὰ εἴδη

ξυλοβάλσαμον, μαστίχην, κρόκον, ἄσαρ, κινάμωμον, ναρδόσταχυν καὶ ἀλόην.

Notes

1 Cf. also *Vaticanus graecus* 299, f. 278r in which the text corresponds closely to Theophanes Chrysobalantes, *Epitome*, 31 and 30 ed. Martius 1568. There then follows a text comparable to parts of that in *Vat. gr.* 292 and 299 (1) and (2).
2 Foliation in this manuscript is as follows: 186–190, 171–173.

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